

Flight, August 3, 1916.

FLIGHT

First Aero Weekly in the World.

Founder and Editor : STANLEY SPOONER.

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TO OUR READERS.

The Supply of "FLIGHT." Important Notice.

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THE PUBLISHERS.

EDITORIAL COMMENT.

PROBABLY a profound appreciation of human nature was at the bottom of the Government's decision to attach to the criticism and report of the Committee on the Royal Aircraft Factory the criticisms by the Air Board of the criticisms of the Committee on the R.A.F. This sounds a bit involved, but that is only in keeping with the idea of the joint publication of these two reports. By this method, whereby the recommendations of the R.A.F. Parliamentary Committee are traversed

The R.A.F. Committee Report.

and brought into doubt by the Air Board views upon the same subject, no doubt such a confusion will arise in the ordinary lay reader's mind as to the real point at issue, that the main findings and conclusions of the inquiry are in a fair way of being submerged in the sorting out of the divergent opinions as to what should constitute the controlling combination of the Factory in the future. The report, nevertheless, is a big step in the right direction, and on the whole we are inclined to prefer the recommendations of the Business Committee, with Sir Richard Burbidge as chairman, to that put forward by the Air Board. At the same time it is difficult for non-service people to appreciate in its real perspective the necessities and details of administration involved in filling the hour-to-hour calls of those finally responsible to the country for the full and efficient utilisation of the organisation at their disposal. From this point of view, the suggestions of the Air Board as to the constitution of the control of the R.A.F. in the future must be respected. Whatever is actually decided in this connection—and from proceedings in Parliament on Monday it is pretty evident the Government are prepared to pin their faith to the judgment as passed by the Air Board—the country may rest assured that after this shake-up the re-organisation of the Farnborough factory will be based on a very solid foundation of honest endeavour to get the best out of it for the nation.

Taking a broad view of the Committee's report, it is evident that, as was generally conceded, there has been considerable looseness in the organisation and in the carrying out of the functions for which the Factory was originally created. Upon the latter

point there has never been the slightest doubt with those who have followed the history of the Factory. Not only was it clearly indicated in Parliament that the bringing into being of this Department was for the especial purpose of building up a practical experimental shop upon a national scale, but this view has been since, time after time, endorsed both by the War Office and even by those closely associated with the working of the Farnborough establishment. Yet without doubt most of the adverse criticism of the R.A.F. has sprung from the feeling which has unquestionably obtained that, in the background there was the ever-present shadow of a firm intention to ultimately build up a huge Government Aircraft Arsenal, to the glorification of those who might be "in possession," but not necessarily carrying with it such efficiency and economic benefits to the Empire, which wholesome private competitive enterprise ever brings in its wake. Private enterprise always has beaten Government undertakings where free competition has been given, and this will for all time be the same. In the case of the R.A.F., it is abundantly evident that this was a weak point, from the remarks in the report in which attention is drawn to the fact that "the numbers engaged in the Central Office, Stores, and other departments of a non-productive nature, reveal an organisation more liberal than is generally found in Government establishments, and on a scale unknown to us in private works." After allowing for the moderation in language usually associated with committees' reports of this character, this indictment is pretty strong, and, in a way, must be taken to endorse some of the suggestive evidence at the Air Inquiry as to the slackness generally of the establishment. In regard to the entry of the Factory either in the past or in the future into the commercial side of aircraft construction, the report is not very convincing. In the preamble of the Committee's report they say:—

"The functions of the Royal Aircraft Factory we understand to include original designs of aeroplanes and engines, improvement of existing designs, manufacture of experimental aeroplanes, engines and their parts, and aeronautical devices; study of experimental work in all material used in an aeroplane; preparation of drawings and specifications for contractors, and, in certain cases, supervision of manufacture; repair of aeroplanes and engines, and provision of aeroplane and engine spare parts for maintenance; production of aeroplanes in limited quantity; and emergency work of all kinds to assist contractors or to make good the failure of contractors.

"From which it is apparent that the War Office has laid it down that the Royal Aircraft Factory should be devoted to experimental rather than manufacturing purposes.

"The Royal Aircraft Factory cannot therefore be regarded as an establishment working on strictly commercial lines; it is rather a very large experimental laboratory, probably the largest in the United Kingdom, where experiments are carried out to full scale, therefore expenses must necessarily be high. Experiments upon models to reduced scale are conducted by the National Physical Laboratory as and when required by the Aeronautical Committee or it may be by the Royal Aircraft Factory."

Now all this is perfectly straightforward and endorses all that has been said as to the legitimate functions of the Factory under its original "Charter," especially when in the next paragraph it is noted that "the only manufactured work done since the war began seems to have been an output of about 50 non-experimental machines and the manufacture of spare parts to meet urgent demands." How these

facts and views can be reconciled, however, with the percentages given of the total amounts absorbed by the various classes of work carried out in the R.A.F. is a mystery. These allot to "experimental work, including about £5,000 on indirect expenditure," 22 per cent. of the cash expended, whilst the "construction of aeroplanes" has accorded to it 35 per cent. It is obvious that something must be wrong here, or else the "remarks" of the Committee must be very seriously re-edited. Here apparently arises another difference of opinion between the Committee and the Air Board, as the latter fall foul of these percentages and claim that the 35 per cent. includes "new experimental, construction, &c., services," and not "construction of aeroplanes." The proportion of actual construction is put by the Air Board as at "probably less than 10 per cent." We agree with the Board that "this is a misapprehension which it appears very desirable to correct." But what appeals to us is how do these extraordinary differences in matters of *fact* come about. That there is still room for discussion and investigation is further suggested by the fact that the Board again are in direct conflict with the Committee even upon the actual constitution of the organisation as at present in operation! Is all this due to too hurried an inquiry by the Committee and a sort of accepting everything as presented by the staff all cut and dried for digestion, or is it due to the want of the necessary technical knowledge by those entrusted with the investigation? Either alternative is highly unsatisfactory to those who hoped to see a sound, frank and well-considered *résumé* of the pros and cons of the administration of the R.A.F.

One of the most recurring sources of irritation amongst the Trade—the numerous alterations after the issue of manufacturing drawings and the absolute errors in drawings—is very emphatically nailed down as being rampant in connection with the aeroplane contracts given out. We might add that wrong figures and dimensions might well have been also added to "errors in drawings." In the "conclusions" of the Committee, after expressing the strong opinion as to the desirability of such an experimental establishment as the R.A.F., the Committee state that:—

"The existing undesirable trade feeling referred to we consider should be met and, if possible, overcome, as its existence can hardly fail to have a detrimental effect on all concerned. We do not consider that the competition of the Royal Aircraft Factory with the trade should, if reasonably administered, be the cause of any detrimental friction or trade feeling."

With this latter conclusion we are, as we have already, and for all time in the past, stated, entirely at variance. What "reasonably administered" means exactly it would not be easy to define, but we can imagine nothing more unlikely than that the "reason" could possibly bear the same interpretation from both sides. As in the past, nothing can regulate prices, quality, invention, initiative and enterprise more than keen commercial competitive construction. It is good for everybody, and not least for the Exchequer. By this means the finest brains are attracted to the industry and, moreover, obtain good value for their goods, and thereby progress is maintained which is calculated to keep this country well ahead in air supremacy. Give over the manufacturing side to a Government official and

AUGUST 3, 1910.



FLIGHT

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AN AMPHIBIAN BIPLANE.—Owing to the shedding of a landing wheel when getting away at Hendon on Sunday last, the pilot of a reconnaissance machine chose the lesser of two evils, and brought his mount safely to rest in the Brent Reservoir. Pilot and passenger escaped with what was a welcome ducking, the day being extremely hot, and the machine was towed safely to the side, practically undamaged.

at once cobwebs begin to be woven over the whole Department, until we should find ourselves a decade or two behind our neighbours, who in the meantime have been preparing for "Tags" of their own in various hemispheres, not calculated to enhance the prosperity of the British Empire. No, let the R.A.F. stick to its original "charter," the prosecuting of practical experiments, and, as we have had occasion to point out consistently in past years, it will have all its work cut out to keep this country to the front in the science of the air, and the present "shops" will be found before very long all too small to even do this efficiently. One suggestion of the Committee, which bears upon the same subject, is distinctly sound in principle, and is to the effect that Government financial assistance, if necessary, should be given to the Trade for the purpose of enhancing the supply of higher-powered engines. This is a practical move in the right direction and far ahead of any scheme to entangle the Factory itself in manufacturing meshes, although, of course, the question of scarcity of skilled mechanics just now is the crux of the whole situation. Already in other directions in the Aeronautical Industry the financial assistance of the Government has brought about immediate and most valuable results, and the plunge thus taken should be but a beginning and an indication of the intention generally, in this and other industries, of the Government to help forward the trade of the Empire, so that, irrespective of whatever restrictions are placed upon German trading ramifications in the future, our people shall, by proper backing, be enabled to establish after the war the trade of the Empire upon a footing and a magnitude undreamt of even by the most sanguine believer in Britain's greatness.

The Air Board also rather indicate that they are not averse to the introduction of construction as part of the Factory's scope, which view we shall hope to see revised before long, especially as they are very emphatic upon the question of the experimental side. They say "no reduction should be made in the amount of experiment conducted at the Factory. On the contrary, this is the aspect of their work which it is desirable to emphasise by every possible means." By confining the entire energies of the establishment in the future to this, the Factory's legitimate *raison d'être* of existence, the Board is not only, as we have said, sure of obtaining the best guarantee for our progress in air navigation, but they will with one stroke obtain the full confidence and most helpful co-operation of the entire trade in the great work which is in front of the aeronautical industry.

With the concluding remark of the Air Board to the effect that "any measures of reorganisation of the R.A.F. should be adopted with the concurrence of the Air Board," we leave this subject for the present, with the conviction that at least the result will be an honest and clean attempt to promote the highest ideals for an unfettered Air Service. But to this end, the Air Board, sooner or later, will require and must be accorded much more extended powers than at present it possesses. The time for an Air Minister may possibly not have arrived yet, but it cannot be very far off, and in the meantime all must unite in making the best of the present compromise, which is leading to the placing of Aviation in its proper sphere. After all, it is as yet but young to have accomplished what it has, and the wonder is that it has not been at a far greater cost than its most virulent critic can saddle it with.

THE "X" AIRCRAFT RAIDS.

The following *communiqués* have been issued by the Field-Marshal Commanding-in-Chief, Home Forces:—

"X 39" Raid, July 29th.

July 29th, 2.35 a.m.

"German airships raided the East Coast early this morning.
"The number of the raiders has not yet been established.
"Reports as to the raiders crossing our coast have come in from Yorkshire and Lincolnshire.
"Bombs were stated to have been dropped, but details are as yet lacking."

July 29th, 1.30 p.m.

"Three airships raided the East Coast between midnight and 1.30 a.m.

"Thirty-two bombs were dropped in Lincolnshire and Norfolk, but no material damage and no casualties were caused. Many other bombs are reported to have fallen into the sea.

"At one place anti-aircraft guns were in action, and succeeded in driving off the aircraft from their objective.

"The raiders appear to have been greatly hampered by fog."

German Version. Berlin, July 29th.

"On the night of the 28th inst. a naval airship squadron attacked the English East Coast, dropping bombs on the railway depôt at Lincoln and industrial establishments near Norwich, the naval bases of Grimsby and Immingham, and on the advance-post vessels off the Humber. The lighthouse at the mouth of the Humber was destroyed. Despite the fact that the airships were fired at with incendiary projectiles, they all returned undamaged to their harbours.—Signed, Chief of the Naval Staff."

The Press Bureau appends the following note:—

"The German report of the air raid of the night of July 28th-29th is full of the usual inaccuracies."

"X 40" Raid, July 31st.

August 1st, 12.45 a.m.

"An attack by a number of hostile airships developed before midnight last night. The raiders were reported crossing our coast line along the eastern and south-eastern counties. Bombs were dropped off the Thames estuary. The attack is proceeding."

August 1st, 2.15 a.m.

"To-night's raid appears to have been carried out by a considerable number of airships. The raiders appear to have spent some time cruising over the counties of Lincoln, Norfolk, Suffolk, Cambridge, Essex, Kent, and Huntingdon. Bombs were dropped somewhat indiscriminately over localities possessing no military importance. At one spot anti-aircraft guns came into action, it is believed with good effect. Full details of the raid are not yet to hand."

3.50 p.m.

"Last night, between the hours of 10 p.m. and midnight, our Eastern and South-Eastern Counties were attacked by several hostile airships.

"The raiders flew at a great height. Owing to this fact, and to patches of mist, the airships' movements gave rise to much uncertainty, and their number was difficult to determine. At least six ships could be reckoned by independent observers, and it is probable that one more flew over the country without dropping bombs.

"The number of bombs was at first greatly exaggerated, owing to the majority of them falling in thinly inhabited districts, and having been heard at great distances. The actual number found up to date is about 60.

"One raider was engaged by aircraft and anti aircraft guns. She was seen to drop to a low altitude, and disappeared in the mist."

5.5 p.m.

"The reports received to-day show that no casualties of any sort were caused by last night's air raid."

The British Air Service

"PER ARDUA AD ASTRA"

UNDER this heading are published each week the official announcements of appointments and promotions affecting the Royal Naval Air Service and the Royal Flying Corps (Military Wing) and Central Flying School. These notices are not duplicated. By way of instance, when an appointment to the Royal Naval Air Service is announced by the Admiralty it is published forthwith, but subsequently, when it appears in the LONDON GAZETTE, it is not repeated in this column.

Royal Naval Air Service.

THE following appeared among the Admiralty announcements of July 25th:—

Acting Lieutenant (R.M.): G. E. Wildman-Lushington, appointed Probationary Flight Sub-Lieutenant (temporary), seniority July 22nd, and appointed to "President," additional, for R.N.A.S.

Sub-Lieutenant (temporary, R.N.V.R.): B. M. Dodds, promoted to Lieutenant (temporary), seniority July 21st.

The following temporary commissions have been granted (R.N.V.R.): Lieutenant: A. T. Evans, C. E. Stent, H. R. C. Adams, A. H. White, L. S. M. Pyke, all seniority July 24th. Sub-Lieutenants: L. F. Binns, seniority July 22nd; N. W. Hughes and H. G. W. Cox, both seniority July 24th.

The following appeared among the Admiralty announcements of July 27th:—

Sub-Lieutenant (temporary, R.N.V.R.): V. S. Wright, appointed Probationary Flight Sub-Lieutenant (temporary), seniority July 30th, and appointed to "President," additional, for R.N.A.S.

Petty Officer (Mechanic): R. M. Catterson-Smith, granted a temporary commission as Sub-Lieutenant (R.N.V.R.), seniority July 24th, and appointed to "President," additional, for R.N.A.S.

The following appeared in the *London Gazette* of July 28th:—

The following promotions have been made:—

Wing-Commanders to be Wing-Captains.—E. A. D. Master-

man, E. M. Maitland, E. L. Gerrard, C. I. Lambe; June 30th, 1916.

Squadron-Commanders to be Wing-Commanders.—C. M. Waterlow, J. W. Seddon, J. C. Porte; June 30th, 1916.

Flight-Commanders to be Squadron-Commanders.—D. H. Hyde-Thomson, A. J. Miley, W. C. Hicks, E. Osmond, I. H. W. S. Dalrymple-Clark (Acting Squadron-Commander), R. J. Bone, D.S.O., C. H. K. Edmonds, D.S.O., I. G. V. Fowler, H. M. Cave-Brown-Cave, A. D. Cunningham, R. E. C. Peirse, D.S.O., J. R. W. Smyth-Pigott, D.S.O. (Acting Squadron-Commander), P. F. M. Fellowes; June 30th, 1916.

Flight-Lieutenants to be Flight-Commanders.—E. B. Beauman, N. B. Tomlinson, C. W. H. Pulford, P. L. Holmes, E. R. Whitehouse, H. Stewart, A. R. Arnold, N. S. Douglas, G. B. Dacre, D.S.O., R. J. J. Hope-Vere (Acting Flight-Commander), R. Whitehead, V. G. Blackburn, D.S.C., G. L. Thomson, D.S.C., I. H. B. Hartford, G. C. Colmore (Acting Flight-Commander), A. K. Robertson (temporary service), B. F. Fowler (temporary service), D. Harries, G. H. Scott, R. E. Nicoll, K. S. Savory, D.S.O., T. H. England, V. Nicholl, D.S.C., B. L. Huskisson, J. J. Petre, E. H. Dunning, D.S.C., H. F. Towler; June 30th, 1916.

Flight Sub-Lieutenants to be Flight-Lieutenants.—F. J. Bailey, L. H. F. Irving, R. G. Mack, W. F. Horner, A. W. Mylne, R. A. Cochrane, R. S. Booth, G. M. Thomas, C. J. Galpin, J. G. Struthers (temporary service), R. S. Smith, E. A. de Lossy de Ville (temporary service), G. A. Cox, S. St. G. C. Belfield (temporary service), C. L. Scott, E. J. P.



A POPULAR R.N.A.S. OFFICER.—At the wedding last week of Flight Sub-Lieut. MacMinnies and Miss L. Kermode at St. Anne's Church, Eastbourne. A batch of air-mechanics hauling along the carriage, containing the bride and bridegroom.

Burling, H. C. Vereker, J. B. Cole-Hamilton, E. P. Hardman (temporary service), S. R. Watkins (temporary service), J. A. Goodwin, G. G. G. Hodge, C. F. Latimer, S. B. Joyce, C. R. Blagrove (temporary service), G. G. Ommanney, H. de V. Leigh, H. S. Bompas (temporary service), L. C. Keeble, H. A. Bower, J. D. Hume (temporary service), P. Roach-Pierson, V. Nicholson (temporary service) (since killed), N. W. G. Blackburn (temporary service), C. C. Wyllie (temporary service), H. K. Thorold, D.S.C., H. S. Neville (temporary service), E. W. Norton, E. Cadbury, J. H. D. Grant (temporary service), M. H. Spencer (temporary service), E. M. Pizey (temporary service), S. Bell (temporary service), B. C. Clayton, J. E. Minifie (temporary service), R. S. Dallas (temporary service), A. D. W. Allen (temporary service), C. R. Mackenzie (temporary service), F. U. Y. Weldon (temporary service), C. MacLaurin (temporary service), C. T. Freeman (temporary service), J. A. Carr (temporary service), C. B. Gasson (temporary service), P. A. Johnston (temporary service), A. T. N. Cowley (temporary service), G. V. Leather (temporary service), C. H. Hayward (temporary service), J. H. Vickers (temporary service), B. C. Tooke; June 30th, 1916.

The following appeared among the Admiralty announcements of July 28th:—

The following promotions have been made to date June 30th:—

Wing-Commanders to be Acting Wing-Captains.—W. L. Elder and R. M. Groves, D.S.O.

Squadron-Commanders to be Acting Wing-Commanders.—G. W. S. Aldwell, E. T. R. Chambers, and W. Briggs.

Flight-Commanders to be Acting Squadron-Commanders.—E. H. Sparling, G. R. Bromet, and H. R. Busteed.

Flight-Lieutenants to be Acting Flight-Commanders.—J. Bird and R. B. B. Colmore.

Warrant Officers II. to be Warrant Officers I.—W. A. Hancock, C. F. Rasmusen, and G. Bowen.

Chief Petty Officers, 1st Class, to be Warrant Officers II.—H. Bradford, H. P. Leigh, W. H. Jinman, and H. Satterford.

Chief Petty Officer, 2nd Class, to be Warrant Officer II.—W. G. Kentfield.

Engineer-Capt. (retired) R. K. Herbert to "President," additional, for duties in connection with R.N.A.S. recruiting, July 27th.

The undermentioned have been entered as Probationary Flight Sub-Lieutenants for temporary service and appointed to the "President," additional for R.N.A.S., all to date July 30th; J. Gamon, A. W. Kay, C. F. Brewerton, H. F. Delarue, E. H. Snell, G. L. Elliott, E. A. H. Birch, A. Adamson, B. R. Millar, A. L. Rimer, B. H. Bridge, E. W. Unmack, T. S. S. Hood, J. E. Rushbrooke, R. S. Freeman, M. C. Radford, T. A. Gladstone, P. C. Wood, E. Dickson, A. V. Lewis, N. C. Watt, also R. V. Knight; August 6th.

H. Slaney and W. L. Amos have been granted temporary commissions as Sub-Lieutenants, R.N.V.R., and appointed to the "President," additional, for R.N.A.S., to date July 27th.

The following appeared among the Admiralty announcements of July 31st:—

Temporary Probationary Flight Sub-Lieut. R. J. E. S. Dawson granted a temporary commission as Sub-Lieutenant, R.N.V.R., with seniority August 6th.

Royal Flying Corps (Military Wing).

The following appeared in a supplement to the *London Gazette* issued on July 24th:—

Equipment Officers.—Lieut. E. Powell, Special Reserves, from Assistant Equipment Officer, and to be Temporary Captain whilst so employed; May 6th, 1916. Capt. G. Adams, S. Lancs. Regt., and to be seconded; May 27th, 1916.

Supplementary to Regular Corps.—Stanley Morris to be Second. Lieut.; July 7th, 1916.

The following appeared in the *London Gazette* of July 25th:—

Wing Commanders (from Squadron Commanders, and to be Temporary Lieutenant-Colonels whilst so employed).—Capt. (Temporary Major) U. J. D. Bourke, Oxford and Bucks L.I., vice Capt. (Temporary Lieut.-Col.) A. C. H. MacLean, R. Scots; June 18th, 1916. Capt. (Temporary Major) W. R. Freeman, Manch. R.; July 5th, 1916.

Depôt Commander.—Major A. D. Carden, R.E., from a Park Commander, and to be Temporary Lieutenant-Colonel whilst so employed; May 31st, 1916.

Squadron Commander.—Temporary Capt. the Hon. A. S. Byng, General List, from a Flight Commander, and to be Temporary Major whilst so employed; July 5th, 1916.

Park Commanders.—Capt. (Temporary Major) R. Orme, Special Reserve, from a Squadron Commander, and to retain his temporary rank whilst so employed; May 10th, 1916. From Equipment Officers, and to be Temporary Majors whilst so employed.—Temporary Capt. H. Burchell, Special Reserve; May 31st, 1916. Lieut. (Temporary Capt.) N. Goldsmith, R.A.; July 6th, 1916.

Flight Commanders.—June 1st, 1916: Capt. R. Blatherwick, R. Sc. Fus., Special Reserve, from a Flying Officer. From Flying Officers, and to be Temporary Captains whilst so employed: Lieut. J. P. Inglefield, Special Reserve; Lieut. A. A. A. Knight, R. Muns. Fus.; Second Lieut. R. K. Shives, Special Reserve; Second Lieut. B. H. Radford, Special Reserve, from a Balloon Officer, and to be Temporary Captain whilst so employed; June 9th, 1916. Lieut. O. T. Boyd, 5th Cav., Ind. Army, from a Flying Officer, and to be Temporary Captain whilst so employed; July 9th, 1916.

Flying Officers (Observers).—July 7th, 1916: Second Lieut. F. A. Hunter, R.F.A., Special Reserve; Temporary Second Lieut. W. S. Joel, Bord. R., and to be transferred to the General List; Temporary Second Lieut. P. T. Carden, General List; Temporary Second Lieut. N. B. Harris, General List.

Assistant Equipment Officers.—Second Lieut. K. Arnold, Special Reserve; May 29th, 1916. Second Lieut. B. R. S. Jones, S. Wales Bord., Special Reserve, and to be seconded; June 22nd, 1916.

Memoranda.—To be Temporary Second Lieutenants for duty with Royal Flying Corps: Corp. (Cadet) Benjamin Soutten, from R. Fus.; July 8th, 1916. July 10th, 1916: Cadet Graham S. Steel, Pte. Ralph C. Fielder, from H.A.C. (T.F.).

Supplementary to Regular Corps.—Second Lieutenants (on probation) confirmed in their rank: J. M. Drysdale, P. Adams, H. A. Browne, P. M. T. Hill.

Kenneth Arnold to be Second Lieutenant; May 29th, 1916.

To be Second Lieutenants (on probation): Thomas G. Leith; July 1st, 1916. Antoine E. Verpillieux; July 4th, 1916. Thomas McC. Yarwood; July 7th, 1916. Franklin E. Pike; July 10th, 1916.

The following appeared in a supplement to the *London Gazette* issued on July 26th:—

Flight Commanders.—From Flying Officers, and to be Temporary Captains whilst so employed: Lieut. R. G. Gould, Special Reserve; June 20th, 1916. Lieut. D. B. Richardson, Welsh Divl. Engrs., R.E. (T.F.); June 22nd, 1916. July 7th, 1916: Temporary Lieut. A. H. Smith, General List; Lieut. E. R. Valsey, Essex R. (since deceased). Second Lieut. A. W. C. V. Parr, Rif. Brig.; July 8th, 1916.

Flying Officers.—Second Lieut. F. H. Stone, Special Reserve; July 5th, 1916. Temporary Lieut. G. W. N. R. Haynes, R. Muns. Fus., and to be transferred to the General List; Temporary Second Lieut. C. C. Hayward, Rif. Brig., and to be transferred to the General List; Second Lieut. G. H. Russell, Notts and Derby R., and to be seconded; July 6th, 1916: Second Lieut. (Temporary Lieut.) H. W. Stafford, Lan. Fort Engrs., R.E. (T.F.); Second Lieut. (Temporary Lieut.) L. C. Pockney, N. Midland Brig., R.F.A. (T.F.); Lieut. E. V. C. Hamilton, Worc. R., and to be seconded; Temporary Lieut. J. B. Quedest, A.S.C., and to be transferred to the General List; Temporary Second Lieut. F. D. Jackson, Lan. Fus., and to be transferred to the General List; Temporary Second Lieut. L. C. Drenon, General List, from a Flying Officer (Observer); Second Lieut. H. M. B. Law, Special Reserve; Second Lieut. H. D. Crompton, Special Reserve; Temporary Second Lieut. P. W. Chambers, General List; Temporary Second Lieut. H. C. Todd, General List; Second Lieut. C. W. Carleton, Special Reserve; Temporary Second Lieut. T. W. Jay, General List; Second Lieut. C. A. R. Shum, Special Reserve; Second Lieut. P. W. Snell, Special Reserve; Second Lieut. J. K. Tullis, R.F.A. (T.F.); Second Lieut. C. R. Young, Special Reserve; Second Lieut. F. B. Baragar, Special Reserve; Second Lieut. W. E. L. Seward, Special Reserve; Second Lieut. G. R. Travis, Special Reserve; Second Lieut. W. L. Hay, Special Reserve; Second Lieut. E. E. E. Pope, Special Reserve. July 7th, 1916: Temporary Lieut. S. B. Smith, S. Staff. R., and to be transferred to the General List; Lieut. T. L. Mallory, Lan. Fus., Special Reserve, and to be seconded; Temporary Second Lieut. H. E. Bagot, R.F.A., and to be transferred to the General List; Second Lieut. G. S. Rogers, Special Reserve; Temporary Second Lieut. E. J. Garland, General List; Second Lieut. H. M. Massey, Notts and Derby R., and to be seconded; Second Lieutenant W. S. FitzR. Saundby, York,

R., and to be seconded; Second Lieut. F. H. B. Selous, R. W. Surr. R., and to be seconded; July 9th, 1916. July 10th, 1916: Lieut. N. F. Anderson, Canadian A.S.C.; Second Lieut. M. M. Sisley, Special Reserve; Temporary Second Lieut. E. A. Pope, General List. July 11th, 1916: Lieut. E. G. Roberts, Australian Flying Corps; Temporary Second Lieut. C. M. Kelly, L'pool R., and to be transferred to the General List; Temporary Second Lieut. J. H. Gale, General List; Second Lieut. J. M. Drysdale, Special Reserve.

Flying Officer (Observer).—Temporary Second Lieut. S. Wilkins, General List; July 11th, 1916.

Balloon Officers.—July 10th, 1916: Lieut. E. F. Campbell, K.R.R.C., and to be seconded; Temporary Second Lieut. D. C. Rowlett, N. Staff. R., and to be transferred to the General List; Second Lieut. J. W. Bradford, York. R. (T.F.); Temporary Second Lieut. H. P. Jenkinson, R.F.A., and to be transferred to the General List; Second Lieut. T. H. J. Wright, Sea. Highrs., and to be seconded; Temporary Second Lieut. R. B. Wann, R. W. Kent R., and to be transferred to the General List; Second Lieut. H. H. Burt, Special Reserve; Second Lieut. J. Mitchell, Special Reserve.

Assistant Equipment Officers.—Second Lieutenants, Special Reserve: W. Yonge; May 27th, 1916. R. H. Whittington; June 11th, 1916. June 12th, 1916: J. J. Botterill, T. McL. MacKay. S. H. Hawes; June 13th, 1916. P. Adams; June 22nd, 1916. June 23rd, 1916: H. A. Browne, E. E. G. B. Lennard, J. L. Luntley; June 24th, 1916. Temporary Second Lieut. S. R. Axford, General List; June 25th, 1916. Temporary Second Lieut. H. B. Wakefield, General List; June 28th, 1916. June 30th, 1916: Lieut. V. O. Rees, Lond. R. (T.F.), Second Lieut. P. M. T. Hill, Special Reserve. July 5th, 1916: Second Lieut. L. S. Dell, R.F.A., Second Lieut. G. R. Nicholson, Special Reserve. Second Lieut. S. Morris, Special Reserve; July 10th, 1916.

Memoranda.—2nd Class Air-Mechanic Raymond Grant Fraser, from Royal Flying Corps, to be Temporary Second Lieut. for duty with the Military Wing of that Corps; July 5th, 1916.

Pte. Lachlan Macdonald, from Inns of Court O.T.C., to be Temporary Second Lieut. for duty with the Royal Flying Corps; July 7th, 1916.

Supplementary to Regular Corps.—Second Lieutenants (on probation) confirmed in their rank: W. E. L. Seward, G. R. Travis, H. H. Burt, R. H. Whittington, T. McL. Mackay, J. J. Botterill, W. L. Hay, S. H. Hawes.

Wilfred Yonge to be Second Lieutenant; May 27th, 1916. To be Second Lieutenants (on probation): Sydney A. Harding; June 14th, 1916. Frederick C. Thomas; June 16th, 1916. Robert W. Reid; July 15th, 1916.

The following appeared in a supplement to the *London Gazette*, issued on July 27th:—

Park Commander.—Maj. A. F. S. Leggatt, R. Scots, from Adjutant; June 26th, 1916.

Flight Commander.—Second Lieut. E. B. Broughton, Special Reserves, from a Balloon Officer, and to be temporary Captain whilst so employed; July 5th, 1916. From Flying Officers and to be temporary Captains whilst so employed: Second Lieut. F. J. H. Thayer, Special Reserves; July 10th, 1916. Lieut. W. E. F. Davidson, E. York. Regt., Special Reserves; July 12th, 1916.

Flying Officer.—Temporary Second Lieut. E. M. Chamberlain, General List; September 7th, 1915.

Memoranda.—To be temporary Second Lieuts. (on probation) for duty with R.F.C., July 7th, 1916: W. H. N. Shakespeare, J. W. Somers, R. Turnell, W. D. Patrick, all from No. 9 Officer Cadet Bn.; H. J. Green, No. 4 C.B.; J. H. R. Sutherland, No. 7 C.B.; H. V. James, No. 6 O.C.B.; A. R. Johnston, No. 4 O.C.B.; W. D. G. Lotan, No. 9 O.C.B.; C. J. Thompson, No. 9 O.C.B.; N. G. Arnold, No. 7 O.C.B.; J. H. Cross, No. 9 O.C.B. E. V. Gibson, No. 6 O.C.B.; J. Wood, No. 4 O.C.B.; E. T. Dunford, No. 7 O.C.B.; J. B. Pierce, No. 4 O.C.B.; F. Fenwick, No. 9 O.C.B.; H. D. Higham, No. 7 O.C.B.; J. Hodder, No. 9 O.C.B.; G. O. Maugham, No. 4 O.C.B.; R. D. Baker, No. 7 O.C.B.; A. S. Carey, Inns of C. O.T.C.; J. V. Lyle, No. 9 O.C.B.; J. Whyte, No. 9 O.C.B.; E. P. Wilton, No. 9 O.C.B.; A. L. Baker, No. 3 O.C.B.; D. E. Davies, No. 2 O.C.B.; W. F. H. Fullerton, No. 7 O.C.B.; W. G. Foulds, No. 9 O.C.B.; H. E. Rahtkens, No. 6 O.C.B.; R. Turner, No. 9 O.C.B.; C. A. Brown, Second Artists Rifles, O.T.C.; A. H. Hodgson, No. 4 O.C.B.; L. I. Barker, Second Artists' Rifles O.T.C.; H. Gammon, Inns of C. O.T.C.; C. Emery, No. 6 O.C.B.; W. Jordan, No. 4 O.C.B.; E. W. Lamont, No. 6 O.C.B.

A. P. Davies, No. 4 O.C.B.; C. B. Holland, No. 6 O.C.B.; C. F. Crapp, No. 4 O.C.B.; W. S. Morrison, No. 6 O.C.B.; J. W. Foreman, No. 9 O.C.B.; J. H. Gotch, No. 7 O.C.B.; H. C. Head-Jenner, No. 4 O.C.B.; J. S. Trelease, No. 9 O.C.B.; R. B. Corfield, No. 4 O.C.B.; D. C. Ellis, No. 6 O.C.B.; F. J. Taylor, No. 3 O.C.B.; A. R. Frier, No. 2 O.C.B.; A. Morrison, No. 4 O.C.B.; J. O. Barnett, Inns of C. O.T.C.; A. Lindley, No. 4 O.C.B.; H. E. Arnold, No. 2 O.C.B.; F. E. Smyth, No. 9 O.C.B.; R. M. Swyer, No. 2 O.C.B.; A. C. Wyness, No. 3 O.C.B.; J. Fleming, No. 3 O.C.B.; H. J. Howell, No. 4 O.C.B.; F. R. Maugham, No. 4 O.C.B.; S. O. Smith, No. 4 O.C.B.; J. F. Guinan, No. 4 O.C.B.; R. E. J. Fulljames, Inns of C. O.T.C.; D. H. Robertson, No. 4 O.C.B.; G. M. Underwood, No. 9 O.C.B.; W. G. Holbrow, No. 3 O.C.B.; E. W. A. Hunt, No. 6 O.C.B.; F. H. Wilson, No. 3 O.C.B.; V. M. Fallowfield-Cooper, Inns of C. O.T.C.; W. M. Groom, No. 4 O.C.B.; F. V. Kelway, No. 3 O.C.B.; C. D. Smart, No. 4 O.C.B.; J. J. Tindal, No. 9 O.C.B.; F. H. Austin, Inns of C. O.T.C.; T. H. G. Chaplin, No. 3 O.C.B.; C. R. H. Jackson, Inns of C. O.T.C.; G. F. Mackay, No. 7 O.C.B.; C. H. Smith, No. 4 O.C.B.; G. S. Thwaites, No. 4 O.C.B.; J. A. Vessey, No. 2 O.C.B.; C. P. Williams, No. 3 O.C.B.; F. Collard, No. 9 O.C.B.; H. Matthews, No. 10 O.C.B.; G. H. Bennett, No. 6 O.C.B.; E. W. Ridgway, No. 4 O.C.B.; W. A. G. Young, Second Artists Rifles, O.T.C.; J. E. Lewis, No. 6 O.C.B.; D. E. Greenhow, No. 3 O.C.B.; E. T. Collins, Inns of C. O.T.C.; W. J. Thuell, Second Artists Rifles O.T.C.; G. F. Turberville, Inns of C. O.T.C.; J. Muirhead, Inns of C. O.T.C.; H. J. Bailey, No. 3 O.C.B.; G. Eastwood, No. 2 O.C.B.; A. V. Griggs, No. 3 O.C.B.; H. Bowker, No. 3 O.C.B.; H. M. S. Church, No. 2 O.C.B.; J. S. Morison, Inns of C. O.T.C.; C. F. Matthew, No. 4 O.C.B.

Supplementary to Regular Corps.—Second Lieut. N. S. Percival resigns his commission; July 28th, 1916.

Second Lieut. (on probation) N. G. Caridia is confirmed in his rank.

To be Second Lieuts. (on probation): William A. Verner-Furlong, June 21st, 1916. July 7th, 1916: Eric Rivers-Smith, Howard Straker, Frederick H. Jones, Joseph A. Chown, Edgar M. Howes, Arthur B. Albert, Oskar Lindquist, Edward S. Cohen, Allison H. Meldrum, Thomas E. H. Bristow, Harold R. Bruty, Alfred C. Blackmore, Hubert Darnell, Claude A. Cuthbert, Leonard F. Bennett.

The following appeared in the *London Gazette* of July 28th:—

Staff Officers, 1st Class.—July 6th, 1916: Graded for pay as A.A.Gs.—From Brigade Majors, and to be temporary Lieutenant Colonels whilst so employed: Lieut. (temporary Capt.) C. F. Lee, W. Som. Yeo., T.F.; Capt. G. Livingstone, London R., T.F.

Staff Officers, 2nd Class.—July 6th, 1916: Graded for pay as Brigade-Majors.—From Staff Captains.—Lieut. (temporary Capt.) A. J. S. Scott, Suss. Yeo., T.F. Temporary Second Lieut. (temporary Capt.) J. B. Solomon, Oxf. and Bucks, L.I.

Staff Officer, 3rd Class (graded for pay as a Staff Captain).—G. D. Pidgeon, Special Reserves, from an Assistant Equipment Officer, and to be temporary Captain whilst so employed, July 6th, 1916.

Squadron Commanders.—July 1st, 1916: Maj. C. Mellor, R.E., from a Flight Commander. From Flight Commanders, and to be temporary Majors whilst so employed: Capt. M. W. Noel, Liverpool R.; Capt. R. E. Lewis, W. Ind. R.; Capt. Lord G. Wellesley, G. Gds.; Capt. D. L. Allen, R. Ir. Fus.; Temp. Capt. C. S. Wynne-Eyton, Gen. List; Lieut. (temporary Capt.) E. P. Graves, R.A.; Lieut. (temporary Capt.) A. A. B. Thomson, R. War. R.

Equipment Officers.—May 27th, 1916: Temporary Capt. C. M. Smith, General List, and to relinquish the rank of Temporary Major; Temporary Lieut. R. H. Brand, General List, and to be Temporary Captain whilst so employed.

Flying Officers.—July 12th, 1916: Temporary Second Lieut. (Temporary Lieut.) H. M. Whitehead, Oxf. and Bucks, L.I., and to be transferred to the General List; Temporary Second Lieut. R. T. Percival, Oxf. and Bucks, L.I., and to be transferred to the General List; Second Lieut. N. G. Caridia, Special Reserve.

Memoranda.—The undermentioned Warrant and Non-Commissioned Officers to be Temporary Second Lieutenants (on probation): Corp. G. E. Maxwell, from R.E., for duty with R.F.C.; May 20th, 1916. June 26th, 1916: Petty Officer W. B. South, from R.N.A.S., for duty with the R.F.C.; Sergt. T. E. Drowley, from R.F.C., for duty with the R.F.C. July 2nd, 1916: Sergt. C. K. Shepherd, from R.F.C., for

duty with the R.F.C.; Sergt. P. S. Williams, from R.F.C., for duty with the R.F.C.

The undermentioned, from R.F.C., to be Temporary Second Lieutenants for duty with the Military Wing of that Corps: Flight-Sergt. H. D. Davis; July 4th, 1916. Second Class Air-Mechanic A. E. Biscoe; July 17th, 1916. The undermentioned to be Temporary Second Lieutenants, for duty with R.F.C., July 22nd, 1916: Sergt. T. S. Edleston, from R. Fus.; Corp. D. G. Harrison, from R.E.; Corp. E. D. Howard, from Inns of Court O.T.C.; Pioneer G. C. Stead, from R.E. (T.F.); Cadet E. F. Loomes, from R.A. Cadet School; Pte. C. V. de Burgh Rogers, from Inns of Court O.T.C.; Pte. B. A. Taylor, from Inns of Court O.T.C.; Pte. M. P. Henderson, from Gord. Highrs. (T.F.); Pte. J. N. Pallister, from A.S.C.; Pte. T. Webb, from Lond. R. (T.F.); Pte. H. G. Spearpoint, from Northd. (Hrs.) Yeo. (T.F.).

Supplementary to Regular Corps.—P. G. Emery to be Second Lieutenant (on probation); July 1st, 1916.

The following appeared in a supplement to the *London Gazette* issued on July 29th:—

Flight-Commanders (from Flying Officers).—Lieut. C. O. Fairbairn, N. Lan. R., Special Reserve, and to be Temporary Captain whilst so employed; April 1st, 1916. July 1st, 1916: Capt. C. H. Saunders, Special Reserve; Capt. M. G. F. Richardson, Northd. Fus. (T.F.). *And to be Temporary Captains whilst so employed:* Lieut. J. B. Elliott, Rif. Brig., Special Reserve; Temporary Lieut. W. E. G. Murray, General List; Lieut. I. T. Lloyd, S. Wales Bord.; Lieut. M. S. Stewart, A.S.C.; Temporary Lieut. J. C. Russell, R.E.; Lieut. E. N. Clifton, C. Gds., Special Reserve; Lieut. O. Greig, Special Reserve; Temporary Lieut. the Hon. E. F. P. Lubbock, A.S.C.; Lieut. A. Lees, R. W. Kent R.; Temporary Second Lieut. J. Sowrey, General List; Second Lieut. R. C. L. Holme, Som. L.I.; Second Lieut. I. H. D. Henderson, Arg. and Suth'd. Highrs.; Second Lieut. C. T. Black, R. War. R.; Second Lieut. A. L. Neale, Linc. R.; Second Lieut. J. W. Gordon, Special Reserve. Temporary Lieut. A. M. Miller, General List; July 12th, 1916. Temporary Lieut. C. Danby, General List; July 13th, 1916. July 16th, 1916: Capt. C. MacKay, 5th Leins. R., Special Reserve, from a Flying Officer. *From Flying Officers, and to be Temporary Captains whilst so employed:* Second Lieut. A. H. O'H. Wood, Special Reserve; Second Lieut. A. T. Watson, Special Reserve.

Flying Officers (Observers).—July 13th, 1916: Temporary

Capt. A. A. Nathan, Herts Yeo. (T.F.); Lieut. G. E. F. Sutton, 28th Canadian Inf. Bn.; Temporary Second Lieut. F. de B. Collette, W. York. R., and to be transferred to the General List.

Assistant Equipment Officers.—July 12th, 1916: Second Lieutenants, Special Reserve: J. Y. de la C. Elliott, M. Myers, A. C. Blackmore, J. A. Chown, E. Rivers-Smith, and H. Straker.

Memoranda.—The under-mentioned to be Temporary Second Lieutenants for duty with Royal Flying Corps. July 22nd, 1916: Cadet A. Morgan, from No. 3 O.C.B.; Cadet W. E. V. Richards, from Bristol Univ. O.T.C. July 29th, 1916: Sergt. F. J. Chown, from St. Paul's School, O.T.C.; Corpl. C. M. White, from St. Paul's School O.T.C.

Supplementary to Regular Corps.—G. Barrett, to be Second Lieutenant (on probation); June 17th, 1916, but with seniority as from 20th Nov., 1914. (Substituted for the notification in the *Gazette* of June 27th, 1916.) The under-mentioned to be Second Lieutenants (on probation). July 12th, 1916: E. E. Robb, A. Clark, C. W. Elliott; July 17th, 1916. July 22nd, 1916: F. W. Keddie, W. Fowler, P. H. R. Whittet, S. S. Jefferies, A. B. Raper, S. J. Young, M. Johnstone, E. D. Doring, W. M. Smith, W. F. Dobson, A. L. Macfarlane, R. C. Orlebar, F. P. Williams, J. E. Histed, A. L. Pattinson, H. D. F. Fraser, R. B. Bourne, E. Armitage, C. Crawford, T. W. L. Dickson, R. W. Farquhar, S. H. Bell, T. M. Finnie, A. L. C. Hartland-Rowe, J. J. Scaramanga. The date of appointment of Second Lieut. (on probation) F. C. Young is July 22nd, 1916, and not as in the *Gazette* of July 11th, 1916.

Aeronautical Inspection Department.

The following appeared in a supplement to the *London Gazette* issued on July 27th:—

Temporary appointment made:—

Inspector of Engines.—Mr. and Hon. Lieut. (Temporary Capt.) J. Starling, R.F.C., from an Equipment Officer, and to retain his temporary rank whilst so employed; July 1st, 1916.

Royal Flying Corps (Territorial Force).

The following appeared in the *London Gazette* of July 28th:—

Hampshire Aircraft Parks.—Lieut. W. J. Stutt relinquishes his commission on appointment to the Aeronautical Department, Australian Commonwealth Government; May 30th, 1916, instead of as previously notified.



AWARDS TO THE R.F.C.

In a supplement to the *London Gazette* issued on July 27th it was announced:—

His Majesty the King has been graciously pleased to approve of the appointment of the under-mentioned officers to be Companions of the Distinguished Service Order, in recognition of their gallantry and devotion to duty in the field:—

CAPTAIN S. GRANT-DALTON, YORK. R., and R.F.C.

For conspicuous gallantry and resource. When on return from escort duty his observer, Second Lieutenant Paris, discovered one of our machines which had been forced to land in enemy country owing to damage by hostile fire. Captain Grant-Dalton with great gallantry landed, destroyed the machine, which was past repair, and returned ninety miles to his aerodrome with his observer and the pilot of the other machine.

SECOND LIEUTENANT G. R. McCUBBIN, Royal Flying Corps., Special Reserve.

For conspicuous gallantry and skill. Seeing one of our machines about to engage two Fokkers he at once entered the fight, and his observer shot down one Fokker, which crashed to the ground. On another occasion, when returning from a bombing raid, he saw one of our machines being followed by a Fokker. He recrossed the lines to the attack, and his observer shot down the Fokker. Although very badly wounded in the arm, he successfully landed his machine well behind our lines.

His Majesty the King has been graciously pleased to confer the Military Cross on the under-mentioned

officers and warrant officers, in recognition of their gallantry and devotion to duty in the field:—

CAPTAIN R. N. ADAMS, R. Fus., Special Reserve, and R.F.C.

For conspicuous gallantry and skill. With Second Lieutenant Vernon as observer, he attacked a flight of six enemy machines within the enemy's lines, and caused one to fall in flames. He was then joined by another of our machines, and together they drove off the remainder, one falling out of control. Previously with Second Lieutenant Cloete as observer he brought down an enemy machine, which turned upside down.

CAPTAIN M. MCB. BELL-IRVING, D.S.O., Royal Flying Corps, Special Reserve.

For conspicuous gallantry when on a photographic reconnaissance. When very severely wounded in the head by fire from an anti-aircraft gun, and half-blinded by blood, he steered for the nearest aerodrome, and, feeling that he could not last out, landed safely in a small field well within our lines. After giving orders for the safe delivery of his photos, he collapsed. His pluck and skill saved his observer.

LIEUTENANT (TEMPORARY CAPTAIN) R. BALCOMBE-BROWNE, R.F.A., Special Reserve, and R.F.C.

For conspicuous gallantry and skill. He attacked an enemy kite balloon and brought it down in flames. He was flying in a type of machine unfamiliar to him owing to the absence through wounds of the regular pilot. At dawn he commenced to learn the machine, and the same evening brought down the kite.

LIEUTENANT J. S. SCOTT, Can. Local Forces and R.F.C.

For conspicuous gallantry and skill. He descended to 1,000 ft. to attack a train well behind the enemy's line, and

though his engine was much damaged, his tank pierced, and his flying wires carried away by hostile fire, he succeeded in landing his machine safely within our lines.

LIEUTENANT (TEMPORARY CAPTAIN) W. A. SUMMERS, 18th Hrs. and R.F.C.

TEMPORARY LIEUTENANT W. O. T. TUDOR-HART, North'd. Fus. and R.F.C.

For conspicuous gallantry and skill. Capt. Summers, as pilot, and Lieut. Tudor-Hart, as observer, attacked a flight of 10 enemy aeroplanes, completely breaking up their formation. They were quite unsupported, but only broke off the engagement when all their ammunition was expended many miles over the enemy's lines. Their machine was under constant heavy fire from as many as four hostile machines at once, and was badly damaged.

SECOND LIEUTENANT A. BALL, 7th Bn., Notts and Derby R. (T.F.), and R.F.C.

For conspicuous skill and gallantry on many occasions, notably when, after failing to destroy an enemy kite balloon with bombs, he returned for a fresh supply, went back, and brought it down in flames. He has done great execution among enemy aeroplanes. On one occasion he attacked six in one flight, forced down two and drove the others off. This occurred several miles over the enemy's lines.

SECOND LIEUTENANT D. CLOETE, Royal Flying Corps, Special Reserve.

For conspicuous gallantry and skill. When one of our machines, piloted by Capt. Adams, was engaged with six enemy machines, he dived on to one of the enemy, drove it down out of control, and then assisted in driving away the remainder. Previously, when acting as observer to Capt. Adams, he brought down an enemy machine, which turned upside down.

SECOND LIEUTENANT (TEMPORARY CAPTAIN) J. A. CROOK, Royal Flying Corps, Special Reserve.

For conspicuous gallantry. He attacked and drove down

to 6,000 ft. a hostile machine, and finally, assisted by another aeroplane, brought it to the ground. He has previously done excellent work, often under heavy anti-aircraft fire.

SECOND LIEUTENANT D. A. L. DAVIDSON, Royal Flying Corps, Special Reserve.

For conspicuous gallantry and determination. When attacked by an enemy fighting scout, his machine was heavily damaged, the control being shot away, and he himself being wounded in three places. He succeeded, however, with great skill in reaching his aerodrome and landing safely, after which he had to be lifted out and carried to hospital.

SECOND LIEUTENANT A. G. D. GAVIN, R. Highrs., Special Reserve and R.F.C.

For conspicuous presence of mind and unselfish courage. When his balloon broke loose and drifted fast towards the enemy's lines, he instructed his passenger in the use of the parachute and helped him out of the basket. He then destroyed all his papers, and descended by his own parachute, landing under machine-gun fire close to the trenches. His passenger also landed safely.

SECOND LIEUTENANT (TEMPORARY CAPTAIN) W. A. G. BELLEW, Conn. Rang. and R.F.C.

For conspicuous gallantry and skill on several occasions, notably the following:—

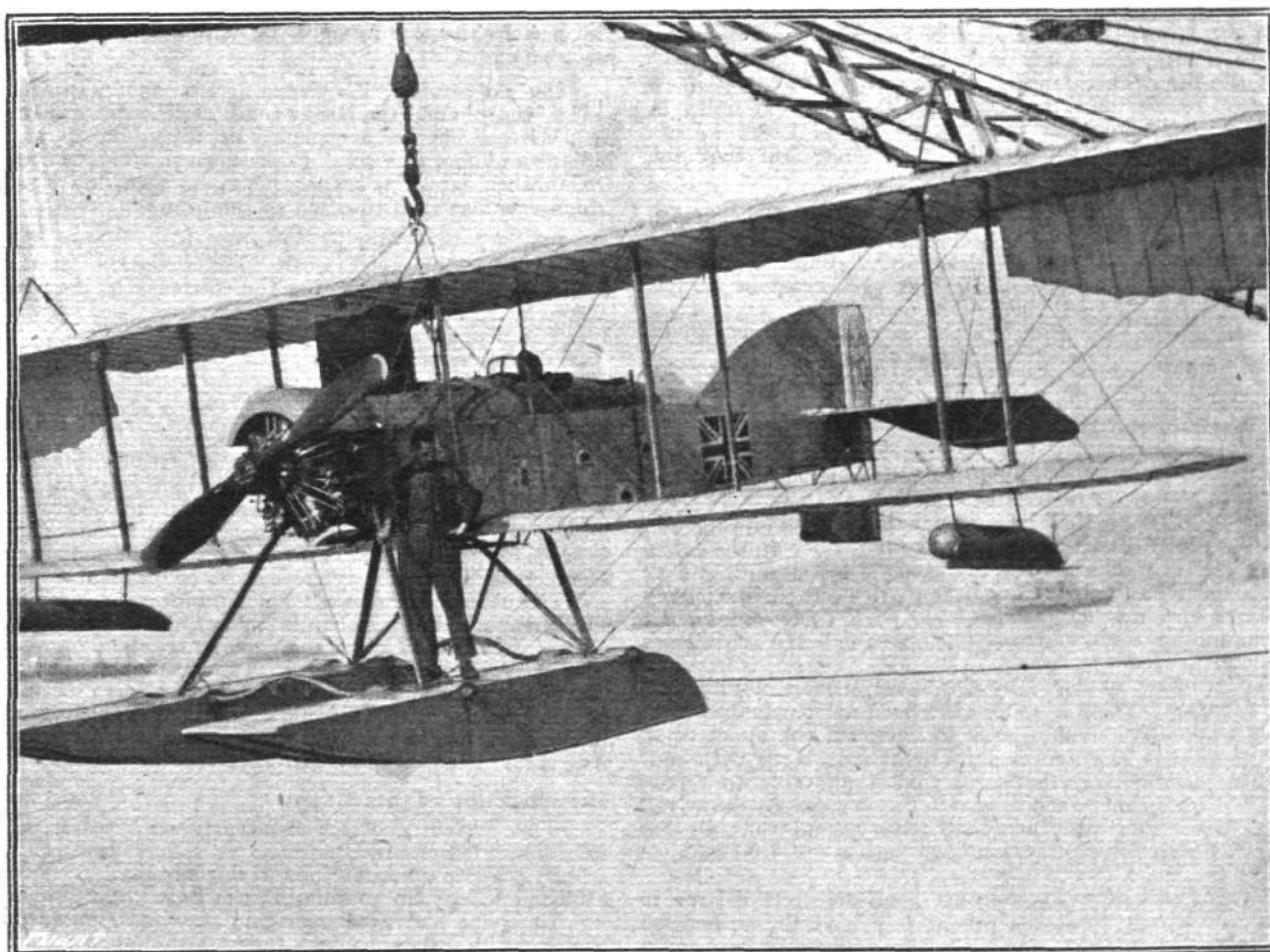
With three other machines he attacked and drove off eight enemy machines, forcing one to the ground.

He attacked four Fokkers, forcing one down to 2,500 ft. Another was seen to crash to the ground during the fight.

When on a bombing raid two of the machines got behind owing to clouds, and were attacked by Fokkers. Capt. Grattan Bellew returned and attacked three Fokkers, one of which his observer shot down, and the others made off.

SECOND LIEUTENANT P. HUSKINSON, Notts. and Derby Regt. and R.F.C.

For conspicuous gallantry and skill. When attacking the enemy's communications, alone and without an observer, he



WITH THE BRITISH FORCES IN SALONICA.—A British seaplane being lowered to the water from the parent ship in Salonica Bay. (Official photograph issued by the Press Bureau.)

FLIGHT

AUGUST 3, 1916.

descended to 800 ft. in order to release his bombs on a train and station. He was under continuous fire, and his engine and machine were seriously damaged, but he succeeded in flying back at a low altitude and safely landing within our lines. He was again heavily fired at as he crossed the lines.

SECOND LIEUTENANT A. S. C. MACLAREN, K.O. Scot. Bord., Special Reserve, and R.F.C.

For conspicuous gallantry. On approaching an enemy aerodrome he observed a hostile aeroplane on the ground preparing to start, with pilot and observer in their seats and mechanics holding on to the wings. He descended to 100 ft., dropped a bomb squarely into the machine and blew it up, together with pilot, observer and mechanics. He then attacked and set fire to a Fokker, which was in a hangar.

SECOND LIEUTENANT H. M. T. LEHMANN, Essex Regt. and R.F.C.

For conspicuous gallantry and skill. When attacking the enemy's communications, alone and without an observer, he dived down to 1,000 ft., under heavy fire, released his bombs on a railway station with great effect, and successfully brought his machine back to his aerodrome.

SECOND LIEUTENANT C. W. P. MAY, R. Ir. Rif., Special Reserve, and R.F.C.

For conspicuous gallantry and skill. He dived low over the enemy lines under heavy fire to attack a kite balloon. He succeeded in hitting it and in bringing it to the ground in flames.

SECOND LIEUTENANT W. A. C. MORGAN, 2nd Bn., Welsh Regt., and R.F.C.

For conspicuous gallantry and skill. With other pilots he attacked an enemy reconnaissance of nine machines. Under heavy machine-gun fire he got within 20 yards of one of them, shot the observer, and brought the machine down in our lines.

TEMPORARY SECOND LIEUTENANT D. K. PARIS, R.A. attached R.F.C.

For conspicuous gallantry and resource. When observer, with Capt. Grant-Dalton as pilot, he observed far within the enemy's country one of our machines on the ground damaged by hostile fire. They landed, destroyed the machine, which was past repair, and brought back the pilot 90 miles in their own aeroplane. It was due to Second Lieut Paris's keen observation and Capt. Grant-Dalton's skill that the pilot was rescued.

SECOND LIEUTENANT (TEMPORARY CAPTAIN) H. TOMLINSON, R.F.C., Special Reserve.

For gallantry and devotion to duty. Capt. Tomlinson has taken part in several raids. On two occasions he has

had serious accidents at night flying, but he has not been in the least discouraged, and has continued to do most valuable work.

SECOND LIEUTENANT L. G. H. VERNON, R. W. Fus., attached R.F.C.

For conspicuous gallantry and skill. With Capt. Adams as pilot he attacked a flight of six enemy machines within their lines. They brought down one in flames, and, after being joined by a second British machine, drove off the remainder, one falling out of control. He has previously done fine work.

His Majesty the King has been graciously pleased to approve of the award of the Distinguished Conduct Medal to the under-mentioned warrant officers, non-commissioned officers and men for acts of gallantry and devotion to duty in the field:—

605 Sergeant-Major G. FELSTEAD, No. 14 Sqdn., R.F.C.

For consistent good work. His devotion to duty has been invaluable in promoting the efficiency of the squadrons.

136 Flight-Sergeant H. GREEN, No. 21 Reserve Sqdn., R.F.C.

For consistent good work. By his perseverance and application he has, though very short-handed, never failed to have aeroplanes ready for reinforcement.

718 Flight-Sergeant F. J. HELLYER, No. 17 Sqdn., R.F.C.

For conspicuous good work. He worked night and day to keep the aeroplanes in working order. The skill he displayed and the example he set enabled this detachment to carry out its duties with success.

2988 Flight-Sergeant E. MEYNELL, Hdqrs., 5th Wing, R.F.C.

For consistent good work as Orderly Room Sergeant. The work has been exceptionally heavy, and he has invariably shown great capability in dealing with it.

2707 Corporal L. VAN SCHAICK, Recruits' Depot, R.F.C.

For conspicuous gallantry and skill. As Observer to one of our machines on escort duty, he attacked an enemy machine and brought it down out of control in some small gardens. He has frequently brought in valuable reports when on reconnaissance.

5800 Corporal J. H. WALLER, No. 25 Sqdn., R.F.C.

For conspicuous gallantry and skill. On one occasion, as passenger on an aeroplane, he dived on to an enemy biplane and shot it down. It was seen to crash to the ground. On another occasion, as passenger, he shot down a Fokker, which was also seen to crash to the ground.

198 Sergeant-Major F. WHILTON, No. 17 Sqdn., R.F.C.

For consistent good work. His devotion to duty has been invaluable in promoting the efficiency of the squadrons.



BRITISH AIR WORK.

The Work of the Dover Patrol.

In the despatch, dated May 29th, from Vice-Admiral Sir Reginald Bacon, describing the work of the Dover Patrol, there is the following reference to the R.N.A.S.:—

"In addition to the daily reconnaissance and protective work performed by the Royal Naval Air Service on the coast, 11 organised attacks against the enemy's aerodromes and 13 attacks on enemy vessels have been carried out. Nine enemy machines and one submarine have been destroyed by air attack, and appreciable damage has been inflicted on military adjuncts.

"The services rendered by the naval airmen in Flanders, under Acting Captain Lambe, have been most valuable.

"It is equally advantageous to maintain the offensive in the air, as it is to do so on land or at sea. It is with considerable satisfaction, therefore, that I am able to report that, with only one exception, all the aeroplanes destroyed were fought over the enemy's territory, and that all the seaplanes were brought down into waters off the enemy's coast.

"The advent of spring weather has lately enabled me to take measures to limit the extent to which the submarine and other vessels of the enemy had free access to the waters off the Belgian coast.

"The success achieved has, so far, been considerable, and the activities of submarine operations from the Belgian coast have been much reduced."

Looping to Attack.

The following extract from a recent report of the R.N.A.S. was issued by the Air Board on July 28th:—

"Dunkirk.—On July 15th one of our aeroplanes, a Nieuport, patrolled 10 miles out to sea, and when approaching Ostend, at about 12,000 ft., encountered a German seaplane—a single-engine tractor type—500 ft. below him.

"The enemy manœuvred for a position behind and below the Nieuport, both machines meanwhile executing a steep glide. The British pilot thereupon looped over the enemy, who passed underneath him. He thus gained the desired position behind and opened fire into the seaplane at a range of 100 yards. The German pilot, who was evidently hit, made a vertical nose-dive. The machine was last seen in flames falling headlong downwards."

British Pilot Flights Zepp.

THE Secretary of the Admiralty on Monday made the following announcement:—

"At 5.15 this morning one of our aeroplanes pursued and attacked a Zeppelin 30 miles off the East Coast.

"The pilot had fired over two trays of ammunition into the Zeppelin, when he was temporarily incapacitated by a portion of his machine-gun flying off and stunning him.

"The Zeppelin was nowhere to be seen when the pilot regained consciousness, and he was therefore forced to return to his station."

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

SPECIAL COMMITTEE MEETING.

A SPECIAL MEETING of The Committee was held on Thursday, July 27th, 1916, when there were present: Prof. A. K. Huntington, in the Chair, Mr. Griffith Brewer, Mr. Ernest C. Bucknall, Flight-Commander C. F. Pollock, R.N., and the Assistant Secretary.

Election of Members.—The following New Members were elected:—

Neville John Campkin.
Second Lieutenant John Wallace Gellatly Mackinlay, R.F.C.
Flight-Commander Redford Henry Mulock, R.N.
Second Lieutenant William Alan Jeune Willans (60th Rifles).

SPECIAL GENERAL MEETING.

A Special General Meeting of the Members of the Royal Aero Club was held on Thursday last, July 27th, 1916, at 166, Piccadilly, London, W. Prof. A. K. Huntington, Vice-Chairman, presided, and there were about 40 Members present.

New Club Premises.—The following summary of the replies received with reference to acquiring a Club House and raising the Annual Subscription to £5 5s. was submitted to the Meeting:—

SUMMARY OF REPLIES RECEIVED UP TO JULY 26TH, 1916 FROM (1) MEMBERS ELECTED SINCE THE ORIGINAL INQUIRY WAS MADE IN OCTOBER, 1913; (2) MEMBERS WHO HAD CHANGED THEIR OPINION SINCE REPLYING BEFORE; AND (3) OLD MEMBERS WHO HAD NOT REPLIED BEFORE.

(a) *Members in favour of new premises and who would pay £5 5s. Subscription.*

New members	78
Members not in favour before	19
Members who had not replied before	16
	113

(b) *Members in favour of new premises but who were unwilling to pay £5 5s. Subscription.*

New Members	3
Members willing to pay increased Subscription before	2
Members who had not replied before	3
	8

(c) *Members not in favour of new premises and who would not pay £5 5s. Subscription.*

New Members	2
Members in favour before	3
Members who had not replied before	2
	7

(d) *Members not in favour during the War.*

New Members	1
Members in favour before	1
Members who had not replied before	4
	6

136 other replies had been received from Members who expressed the same opinion before, as under:—

Members willing to pay the increased Subscription	102
Members unwilling to pay the increased Subscription	34

(14 of these were not in favour of the Club acquiring new premises during the war.)

25 suggestions had been made that there should be a distinction in the Subscription for the following:—

- (1) Founder and Old Members.
- (2) Country Members.
- (3) Members who paid the Subscription merely to support the Club.

Professor Huntington said that he thought the replies received were exceedingly satisfactory. The present premises were unworthy of the Club, and the majority of the Members, especially Service Members, required a Club House. Many Members had no other Club, and as far as one could gather new Flying Officers wished to join the Club, but were not inclined to do so on account of the usual facilities not being offered in the present premises. He thought that it was important (not only from a social point of view) that the Club should be brought into touch with these Officers. Some people pointed out that many Clubs were doing very badly now, but he thought the Royal Aero Club was differently situated in this respect on account of the rapid development of aeronautics. With regard to raising the Subscription, people connected with aeronautics were better off now than they had been, and he thought, therefore, that they would be willing to pay a Subscription of £5 5s.

The Committee had one or two suitable premises in view, but he thought it would be unwise to give particulars of these before negotiations had actually been completed.

A discussion followed on the question of acquiring a Club House in which the following took part: Mr. E. R. Adams, Mr. Charles Bright, The Earl of Carnwath, Mr. R. O. Cary, Mr. Henry Knox, Mr. W. M. Morrison, Lieut.-Com. H. E. Perrin, R.N.V.R., Mr. E. O. Sachs, Mr. F. Harold Sully, Lieut. G. T. Temple and Mr. G. Holt Thomas.

On the motion of Mr. Henry Knox, seconded by Mr. Charles Bright, it was unanimously resolved that Rule 50 be altered as follows:—

Rule 50.—For the year 1917 and thereafter the subscription for Members shall be £5 5s. per annum and for Lady Members £2 2s. per annum or such other sum as may be decided upon in General Meeting, and the entrance fee £2 2s., or such other sum as the Committee may from time to time determine.

The Meeting concluded with a vote of thanks to the Chairman.

THE FLYING SERVICES FUND administered by THE ROYAL AERO CLUB.

THE Flying Services Fund has been instituted by the Royal Aero Club for the benefit of officers and men of the Royal Naval Air Service and the Royal Flying Corps who are incapacitated on active service, and for the widows and dependants of those who are killed.

The Fund is intended for the benefit of all ranks, but especially for petty officers, non-commissioned officers, and men.

Forms of application for assistance can be obtained from the Royal Aero Club, 166, Piccadilly, London, W.

Subscriptions.

	£	s.	d.
Total subscriptions received to July 25th, 1916	10,797	5	11
Staff and Workers of Gwynnes, Ltd. (Twentieth Contribution)		7	14 3
Collected at the Westland Aircraft Works, Yeovil (Forty-second contribution)		0	18 0
R. H. Dewes		0	3 6

Total, August 1st, 1916.. .. 10,806 1 8

B. STEVENSON, Assistant Secretary.
166, Piccadilly, W.

FROM THE BRITISH FLYING GROUNDS.

Grahame-White School, Hendon.

Straights with Instructor last week: Messrs. Alty, Duncan, Edwards, Fisher, Lyles, Ormerod, Saunders, Soden and Styles. Circuits with Instructor: Messrs. Ballard, Drew, Jamie and Stevens. Eights with Instructor: Messrs. Cooper, Donald, Goodhart, Kay, Keymer, and Phillips. Instructors during week: Messrs. Manton, Winter, Pashley, Hale and Biard.

Beatty School, Hendon.

The following pupils were out during last week: Messrs. Cuthbert, Gliksten, Garlick, Hathaway, Earl, Skeet, Mitchell, Rudd, Gadsden, McPherson, Towson, Elliott, Austen, White, Curry, Wood, de Wilde, Sach, Owen, J. Squires, and Wilkinson.

The instructors were Messrs. G. W. Beatty, G. Virgilio, L. L. King, A. E. Mitchell and H. Fawcett; the machines in use being Beatty-Wright dual-control and single-seater propeller biplanes, and Caudron dual-control and single-seater tractor biplanes. Certificates were taken during the week by Mr. R. H. New, on a Beatty-Wright machine, and Mr. W. G. Edwards, on a Caudron.

Hall School, Hendon.

Pupils at work last week: With Cecil M. Hill:

Mr. Duncan. With P. G. Allen: Messrs. Russell, Henley, Illingworth, Cownie, Course and Cordner. With F. G. Glegg: Mr. Stampes, Lieut. Raymond Malden, Messrs. Course, Smith and Mayer, and Lieut. Packman. Hall (Government type) tractor machines in use.

Certificate taken by Mr. Duncan in good style.

London and Provincial School, Hendon.

Pupils doing rolling last week: Messrs. Quayle, Mander, Lewis, Randell, Birkins and Fox. Pupils doing straights: Messrs. Sivewright, Quayle, Egerton, Leman, Bush and Vickers. Pupils doing circuits and eights: Messrs. Bush, Vickers, and Sivewright.

Bournemouth School.

Pupils rolling alone last week: Messrs. Kennedy, Ross, Montgomery, Holland, Owen and Davies. Pupils doing straights: Messrs. O. Wilson, Smith, Adamson, Daniel, Hammersley, Little, Pritt, J. B. Smith and Fenn. Half circuits alone: Messrs. J. Wilson and J. L. Barlow.

Instructors: Messrs. S. Summerfield and E. Brynildsen. Two 35, one 45 and one 60 h.p. Caudron biplanes in use.



FLYING AT HENDON.

ALTHOUGH the weather was exceptionally fine last Saturday and Sunday, Hendon Aerodrome was by no means overcrowded. Possibly for the time being under-sea craft are a greater attraction than aircraft, and the exhibition of the U-boat in Father Thames may have appropriated many would-be visitors to Hendon. Early in the afternoon the intense heat rendered flying a trifle trying, it being a little bumpy, and there was a marked absence of lift in the air. Nevertheless, plenty of flying was put up by the few pilots that had the energy to leave the shade of the hangars. Apparently, W. Birchenough was doing his utmost to keep cool by following in the slip-stream of his own de Havilland scout. Any way, if he did not succeed in this he certainly thoroughly churned up the air and made matters cooler that way. H. Sykes and A. A. Fletcher (still smiling) tried looping the loop on the 100 h.p. Anzani-Martinsyde tractor biplane as a cooler, and then, as friend Fletcher, who occupied the front seat, found the atmosphere coming from the engine just a trifle warm, he induced the pilot to try and fly the machine tail first, but,

it must be admitted, without success. The machine absolutely refused to, and each time they pointed the nose Heavenwards, down flopped the nose the other way. Shortly after, slight trouble with the magneto put the Martinsyde out of action for the time being. H. C. Biard, B. F. Hale, Marcus D. Manton, and C. Pashley made many flights with passengers on the 80 h.p. G-W. three-seater biplane. L. L. King, of the Beatty School, now quite recovered from his accident, was out on one of the Beatty-Wright biplanes fitted with a 50-and-a-little-bit-more h.p. Beatty engine. In addition to this several Service machines took the air, including some Renault-engined Caudrons piloted by René Desoutter.

Sunday's flying consisted of passenger flights galore on the G-W. three-seater, a further demonstration of the new cooling process by W. Birchenough on a de Havilland scout, a rival demonstration (in the Welsh Harp) by a Service pilot and his passenger, described elsewhere in this issue, and a cross-country flight by René Desoutter on a Renault-Caudron.



Flying at Bournemouth and Poole.

MR. S. SUMMERFIELD was in his best form at the Bournemouth Aerodrome on Wednesday of last week, and his exhibition of trick flying was greatly appreciated by the large crowd, who, taking advantage of the fine weather, visited the aerodrome. On Saturday the Bournemouth Aviation Co., accepting the invitation of the Committee of the Soldiers' Home and Hospital at Poole, arranged for their pilot, Mr. Summerfield, to pay a visit and give a free "show." He was accompanied on the 14 min. trip by Mr. F. E. Etches, and the landing, by a spiral *vol plané* from a height of 3,000 ft., in Poole Park was a piece of skilful piloting which was audibly appreciated by the wounded soldiers. The flags which had decorated the 60 h.p. Caudron during its trip, together with a postcard autographed by pilot and passenger, were sold at Poole, and realised quite a goodly sum to enhance the Committee's funds. As the ground at Poole was very small and uneven, Mr. Summerfield had to return *solo*, but after getting up he executed several stunts before making off for Bournemouth.

Hints for Flight Subs.

THERE are many who are joining the Royal Naval Air Service at the present time who know practically nothing of the way they have in the Navy, and they will be duly grateful to "Fight-Lieutenant" for his little book of hints. It has been closely modelled on Capt. A. H. Trapmann's "Straight Tips

for Subs.," and although it is only waistcoat pocket size, it should be worth its weight in gold to many a young officer, saving him much worry on many minor matters. It treats succinctly and simply of how to obtain a commission, pay and allowances, hints on kit, &c., Standing Orders at one of the principal air stations, &c. There are a number of coloured plates illustrating the uniforms of the various ranks and showing the meaning of the different badges, &c.

It is bound in blue cloth and published by Messrs. Forster, Groom and Co. at 1s. Copies can be obtained at "FLIGHT" Office, price 1s. 1d. post free.

Aerial Fight in the North Sea.

FISHERMEN arriving at Flushing on Saturday, according to the *Telegraaf*, reported having seen on the previous day at noon a fight between a large number of aeroplanes. The fishermen did not wait for definite results, but they did not see any machines brought down. There appears to be something mythical about this aerial battle.

Dutch Arrive Too Late.

A REPORT to the *Telegraaf* from Flushing says that a Dutch warship left the harbour there on July 24th to assist French aviators who had descended in a seaplane near the coast, but outside territorial waters. Meanwhile, however, a German destroyer had already captured the French aviators and towed the seaplane away in the direction of the Belgian coast.



UP at sunrise on this bright Sunday summer morning, I sit in my little writing room and look out over the garden and the distant country, and I feel how gladsome a thing it is to rise early and watch the birth of another day.

Green in a hundred shades is Nature's carpet, stretched out before me as far as eye can see, blending in the southern distance with the purple of the night sky. A fleeting purple, becoming every moment lighter and changing to blue-gold before the molten glory riding higher and yet higher in the eastern sky.

In the near distance I have pictured for me sunrise on the Matterhorn, lower green slopes merging higher to purple, crowned at the summit with red-gold.

As my eye travels along from the meadowland mounting the slope, to the crown, it is as the crescendo of a great orchestra, the rumbling from the muffled side-drum gathering all other instruments in on its way, to form a mighty torrent of sound which explodes itself in cymballic crash midst the higher peaks.

For to me this silence, which can be seen, is seeing that can be heard. Yet I know full well that the Matterhorn is there beyond my garden only in my imagination, and that it is nothing but an Elizabethan mansion standing on high ground, its twisted red-brick chimneys rising high above the surrounding belt of trees to catch the first glow of the morning sunrise.

What wonderful material is this with which my window is glazed? that I should see in the far distance little groups of Alpine climbers wending their way by the cornfield-path. Alas for the tricks that vision and imagination play with the early riser, for as a fact those figures knee-deep in the waving corn are but men of the air, making their way to the aerodrome.

Soon from behind the little coppice on the right I shall see the great white wings soaring upward to greet the morning sun, its first kiss rose-blushing the underplanes.

Ah! it is much that is missed by the sluggard, who, rising, finds the day as he left it yesterday, ignorant of the wonderful promise of the golden sunrise, deaf to the glorious crash of mighty silence. For this is the time when man is nearer to Nature, the time when thoughts are born.

And so, as I write, the light is gathering in strength, the myriad tinting is changing to the commonplace, fancy's fiction fades before advancing day.

All too short is this period when imagination takes control and holds complete sway. For as the colours fade and the world takes on its everyday appearance, I know it for our everyday world—a world that is being torn and rent almost asunder by the vileness of man, where legalised murder is robbing millions of eyes of the power to see that which I have seen this morning.

And now the sun is topping the tall poplars, that long, straight line of waving green which appears to me as a curtain beyond which it is not good to look, for I am looking eastward. Perhaps it were well did I not try to see beyond those poplar trees.

The great presses of Fleet Street are in this early

morning humming, and a little later shall be brought to my door the sheet in which I shall search eagerly for that which I most dread to find. It might be that to me that sheet shall be plain, blank white, with the exception of one single line of letters announcing receipt of the joint contribution of Mother and myself to our nation's need.

Yet, as with every single one of the fathers and mothers in this Empire, I am not afraid to look beyond that row of friendly poplar trees. For they are to the eastward, where the sun rises. And to the eastward is rising that sun which shall for ever dam the torrent of military infamy, to gild the whole world with its golden promise of everlasting peace; revealing by its strengthening light the vileness of man's greediness, the futility of his grasping. I think the men formulating that insulting poster, the one that places a money value on a man's arm, were not early risers. One such purifying sight as that which I witnessed this morning, pregnant with all whisperings of love for humanity, and that hideous poster with its degrading words would never have been. I can imagine its designers persuaded for once to witness, on midsummer day, the sunrise over Stonehenge. Seated in the vehicle that has conveyed them, they shall watch the glorious spectacle, purblind to its magnificence, deaf to its wondrous teachings. Men and women of Great Britain do not, thank God, think of their kith and kin engaged in this great struggle for Christianity, in terms of money value, and to suggest it is indiscretion carried to the extreme.

As I sit here, now bathed in the warmth of the early sun, the suggested value of my boy reposes in the top, left-hand pocket of my waistcoat, it is but a single penny piece. His real value to me lies hidden from the world on the same side of my body, but a little deeper.

There is but one of two things that can happen to that penny. Either, some day, I shall return it to him with thanks, or, stamped with R.F.C. and his name and a date, unadorned with golden setting or embellishment of any kind, it shall, just a simple bronze coin hanging round my neck, pass with me to the Evermore.

Bless my soul! How these early morning watches do affect a man's brain, and into what curious channels do his thoughts run of their own accord. It is just possible that, "somewhere out there," these words will be read by one who, knowing the writer, will think what a queer old dad it has become, and smile at home misgivings for his safety, when he is having such a perfectly lovely time.

Well, perhaps all dads are queer old dads when it comes all-to, and this one stands by no means alone. But we allow ourselves to think these thoughts only in the early mornings, when alone.

About that penny? Oh, he gave it to me on the platform at Waterloo. I having no change, the ticket-clipper passed me on to pay on return. But I changed a ten-shilling note instead. Queer chaps, "Dreamer Dads" and ticket-clippers get wroth at their queer ways.

REPORT ON THE ROYAL AIRCRAFT FACTORY.

We have the honour to submit our report on inquiries made by us into the affairs of the Royal Aircraft Factory, Farnborough, in compliance with the terms of reference conveyed in your letters of March 30th and extended in that of April 18th, which are as follows:—

"To inquire and report whether, within the resources placed by the War Office at the disposal of the Royal Aircraft Factory and the limits imposed by War Office orders, the organisation and management of the Factory are efficient, and to give the Army Council the benefit of their suggestions on any points of the interior administration of the factory which seem to them capable of improvement."

We have received all assistance desired by us from Lieut.-General Sir David Henderson and the Staff of the Military Aeronautics Directorate; Lieut.-Col. M. O'Gorman, Superintendent, Major Heckstall Smith, Assistant Superintendent, and the staff of the Royal Aircraft Factory also afforded us every facility for the fulfilment of the duties imposed upon us in our terms of reference. We desire to express our thanks to all these gentlemen.

We found the organisation and administration of the Royal Aircraft Factory to be as shown on the table attached, marked Appendix "A."

The functions of the Royal Aircraft Factory we understand to include original designs of aeroplanes and engines, improvement of existing designs, manufacture of experimental aeroplanes, engines and their parts, and aeronautical devices; study of and experimental work in all material used in an aeroplane; preparation of drawings and specifications for contractors, and, in certain cases, supervision of manufacture; repair of aeroplanes and engines, and provision of aeroplane and engine spare parts for maintenance; production of aeroplanes in limited quantity; and emergency work of all kinds to assist contractors or to make good the failure of contractors.

From which it is apparent that the War Office has laid it down that the Royal Aircraft Factory should be devoted to experimental rather than manufacturing purposes.

The Royal Aircraft Factory cannot therefore be regarded as an establishment working on strictly commercial lines; it is rather a very large experimental laboratory, probably the largest in the United Kingdom, where experiments are carried out to full scale, therefore expenses must necessarily be high. Experiments upon models to reduced scale are conducted by the National Physical Laboratory as and when required by the Aeronautical Committee or it may be by the Royal Aircraft Factory.

The only manufacturing work done since the war began seems to have been an output of about 50 non-experimental machines and the manufacture of spare parts to meet urgent demands. The orders for spare parts are very numerous, but mostly for small quantities; they, however, aggregate a fair total and their production is an important function of the Royal Aircraft Factory. It is therefore essential that their manufacture and despatch should be economic and expeditious.

The Royal Aircraft Factory has produced * new machines in all since the commencement of the war, while the trade supplies have exceeded * machines.

The approximate value of orders placed by Military Aeronautics Directorate from August 1st, 1914, to March 31st, 1916, for aeroplanes, engines and spares of Royal Aircraft Factory design is *, and of private design about half this amount.

The strength of the Royal Aircraft Factory on March 26th, 1916, was stated by Capt. Douglas to be *. Wages for the week ended March 26th, 1916, amounted to *, excluding the salaries of eight chief officials totalling * per month, and together would, if maintained, show a total of * for a year.

We were informed that the total expenditure on the Royal Aircraft Factory account for the year ended March 31st, 1916, was:—

For wages, salaries and expenses	£
For materials	*
			*

* It is not considered desirable in the public interest to publish the exact figures.

These figures include sums, not at present precisely known, for increases in capital account; a rough estimate being mentioned as between £60,000 and £70,000.

We have been supplied with a copy of the balance-sheet for 1914-15, but the conditions of working during that period were so different to the present, that we have not been able to make any very pertinent use of the figures therein contained.

Major Heckstall Smith supplied us with diagrams from which we have endeavoured to work out the present percentages of the total absorbed by the various classes of work carried out in the Royal Aircraft Factory. Col. M. O'Gorman has checked these figures, which are as follows:—

	Per cent.
(a) For experimental work, including a sum of about £5,000 on indirect expenditure	.. 22
(b) Construction of aeroplanes	.. 35
(c) Repairs to aeroplanes and manufacture of spare parts	.. 33
(d) Repairs to engines and manufactures of spare parts	.. 10
	100

The second item, (b) construction of aeroplanes, will apparently include not only the manufacture of the new aeroplanes in supply already referred to, but the experimental aeroplanes made in proof of designs prepared on paper. As far as we are able to analyse these figures, it would appear that miscellaneous items amounting to about 17 per cent. are spread over (b), (c) and (d).

We were informed that the preparation of a complete design of a new aeroplane occupies from six to nine months before any practical building in quantities can commence. During this period it is understood that the full-size experimental machines are being produced in the shops concurrently with the preparation of the working drawings. We were further informed that it does not infrequently happen that the exigencies of war pressure have made it necessary to place orders with the trade for complete machines before the governing designs are completed in all particulars. It is almost inevitable that up to the time the design is actually finished and proved by the experimental machine, alterations in dimensions of parts will be liable to occur. When orders have been placed with the trade before such a condition of affairs has been arrived at, contractors must be called upon to alter, it may be even to scrap and reproduce parts affected. Payment is, we understand, made in compensation for such variations.

The whole administrative system appears to us to be extremely elaborate, both as regards the records of all particulars of material used in the manufacture of each part of an aeroplane, or engine, but also as regards the course through which the components pass in the various stages from the raw material to the finished article.

During the course of our inquiries, it was brought somewhat prominently to notice that a considerable amount of criticism adverse to the Royal Aircraft Factory administration has been voiced by the Press and apparently also by the aeronautical trade generally. It is possible that it may be due to the occurrence of very numerous alterations made after the issue of manufacturing drawings not the fault of the Royal Aircraft Factory and also to absolute errors in drawings the fault of which must wholly rest with the Royal Aircraft Factory.

Our attention has been drawn to several cases of errors in drawings issued to the trade, which with proper organisation ought not to have been passed.

Conclusions.

From the inquiries we have made and the data afforded to us we are led to the following conclusions:—

We are of the opinion that such an experimental establishment as the Royal Aircraft Factory should be in existence. That on its present wages cost the Factory efficiency could be enhanced as an experimental place and a substantially increased volume of finished work produced provided a sharp line of demarcation be drawn between experimentation and commercial productivity, and the factory be reorganised and

managed as nearly as possible upon a commercial and engineering basis.

From information afforded both at Farnborough and London we conclude that the standard of efficiency required by the War Office for Royal Aircraft Factory finished products is regarded as met, both as to construction and design.

The existing undesirable trade feeling referred to we consider should be met and, if possible, overcome, as its existence can hardly fail to have a detrimental effect on all concerned. We do not consider that the competition of the Royal Aircraft Factory with the Trade should, if reasonably administered, be the cause of any detrimental friction or trade feeling.

From articles and letters in the Press it seems to be considered that British aviators, as compared with enemy aviators, suffer from want of speed in aeroplanes. If this complaint is well founded, there would appear to have been some lack of foresight (whether on the part of the Royal Aircraft Factory or the War Office is not clear) as to the size of engines required to meet war conditions. We are informed that higher powered engines are now being bought from the trade, that some have already been delivered, and are being fitted into concurrently produced machines.

We consider that during the period of war activity the financial resources placed at the disposal of the Royal Aircraft Factory for experimental purposes have been ample to allow experimental work to be expeditiously performed in an efficient manner, and in a degree which should have placed useful and essential data at the disposal of the War Office, Admiralty and private trade. We have no information as to the extent which the Admiralty have availed themselves of the data put at their disposal.

It appears to us that the emoluments offered to heads of departments and others of high technical ability have been too low and are hardly likely to attract many highly qualified gentlemen, or, if attracted, to retain their services. We are of opinion that the work done by the Staff merits more consideration than has hitherto been accorded.

The weakness inherent to a system of under payment has been most materially counteracted since the outbreak of the war, because many gentlemen of the highest ability and standing whose emoluments in private work command salaries of possibly many hundreds or even thousands per annum, are working at salaries so small as to be negligible in their cases. This addition to the technical strength of the establishment has undoubtedly been of the utmost value to the country and the Royal Aircraft Factory.

It has appeared to us that the numbers now engaged in the Central Office, Stores, and other departments of a non-productive nature, reveal an organisation more liberal than is generally found in Government establishments, and on a scale unknown to us in private works. For instance, the Central Office and Stores are manned by* employees out of a total of*.

It has been brought to notice that experiments and other manufacture have not infrequently been delayed owing to lack of material. A carefully selected larger stock of those materials constantly used should more than earn the interest upon the capital involved.

An experimental establishment of this magnitude should be provided with a full equipment of labour-saving devices which are undoubtedly necessary for economic and most rapid production. From such resources, properly utilised, a reduction in number of employees now necessarily working round a particular operation could be effected.

We understood from General Sir David Henderson that he has contemplated strengthening the Department of Aircraft Equipment in London by transferring the designs portion of the Royal Aircraft Factory to London. We are strongly of opinion that any attempt to separate the designs branch from the shops would be disastrous.

From the foregoing it will be apparent that while fully alive to the ungrudging work done under the trying conditions of war pressure by the Superintendent and Staff of the Royal

Aircraft Factory, we think there are parts of the organisation and management where improvements are possible.

Suggestions.

Arising out of the foregoing conclusions after full consideration, we beg to offer the following suggestions or recommendations in compliance with our revised terms of reference:—

We suggest that a Board of Management be formed consisting of a Chairman or Director of the Royal Aircraft Factory, a Superintendent of Designs and a Superintendent of Manufacture, all of whom should be preferably civilians and should give their whole time to the affairs of the Factory, and a Military Adviser without distinctive executive duties. The three last-named gentlemen should rank equally with one another on the Board.

The Director should be well equipped with previous commercial and scientific engineering qualifications and experience. It is not considered essential that he should possess any intimate or previous knowledge of aviation. He should be selected for his recognised ability in administration and management.

We believe the organisation we are suggesting would be much assisted by the appointment of a civilian of high standing and suitable qualifications as Controller of Aircraft Supplies, who would have his headquarters in London and have among his duties the direct communications with contractors and the Royal Aircraft Factory.

As we believe that the capacity of the Factory could be greatly augmented without increase to the present number of employees, we suggest that this should be arrived at in the shape of additional current manufacture of aeroplanes and engines, without impairment, and indeed with increased efficiency of the experimental functions of the Royal Aircraft Factory as now existing.

With regard to the shortage of higher-powered engines, of which the need appears to be great, we suggest that special and strenuous efforts should be made immediately both by the Royal Aircraft Factory and by means of financial assistance, if necessary, to the trade, so that the most rapid production of all the engines may be secured.

We think it would be better that direct contact with contractors, including the issue to them of drawings, should be made through a third party, *e.g.*, the Controller of Aircraft Supplies, and not by the Royal Aircraft Factory. It is, of course, undesirable to cut off all communication between the Royal Aircraft Factory and the trade, but we think it would be preferable that inquiries should first of all be made to the officer issuing drawings, presumably the Controller of Aircraft Supplies, and that he should put any particular contractor into touch with the Royal Aircraft Factory in order that any desired information, data, or explanations, may, when required, be afforded direct. This course would also keep track of alterations, if any, from the original approved designs. Of course, the Controller of Aircraft Supplies and the Director of the Factory would, in fact, be in reasonably close touch.

No useful purpose would be served at this juncture by the submission of recommendations as to the Central Office and Stores. If actually too elaborate, as they seem to us to be at present, the re-arrangement of duties suggested herein would naturally lead to some change in this direction, but it should preferably be left for the action of the new board of management.

We desire to express our thanks to Mr. R. H. Griffith, who has acted as our secretary throughout our investigations.

We have the honour to be,

Sir,

Your obedient Servants,

RICHARD BURBIDGE, Chairman.

CHARLES A. PARSONS.

H. F. DONALDSON.

R. H. GRIFFITH, Secretary.

May 12th, 1916.

II.

REPORT TO THE WAR COMMITTEE BY THE AIR BOARD ON THE SUBJECT OF THE ROYAL AIRCRAFT FACTORY.

Among the subjects to which the Air Board have turned their attention has been the administration and organisation of the Royal Aircraft Factory. They have taken evidence on the matter, and have further given careful consideration to the annexed Report of the Committee appointed by the

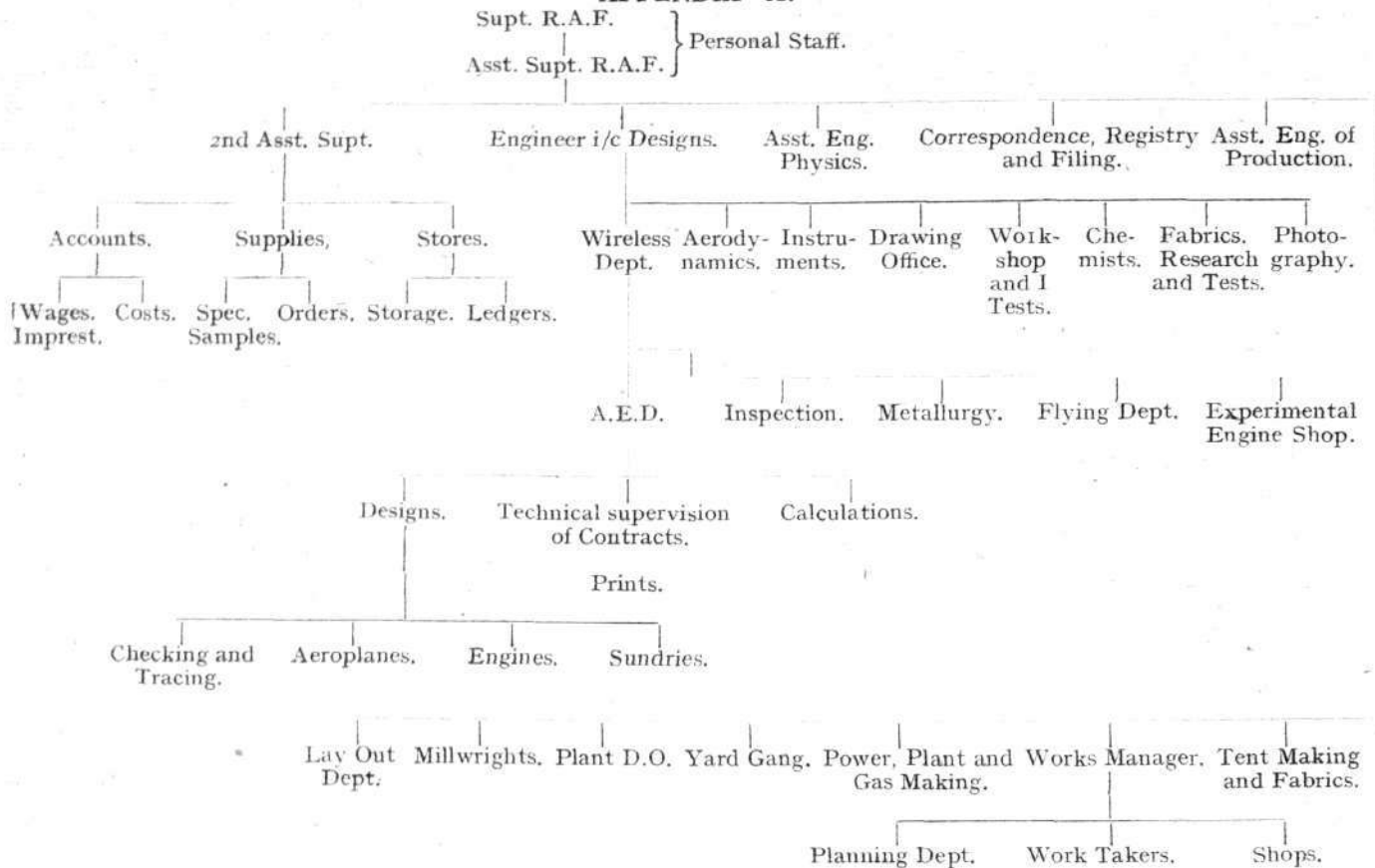
Army Council of which Sir Richard Burbidge was Chairman.

The Air Board are of opinion that this Committee has rendered a valuable public service by its investigation of the management and organisation of the Factory. They think, however, that in certain respects the Report may give a not altogether correct impression, and with some of

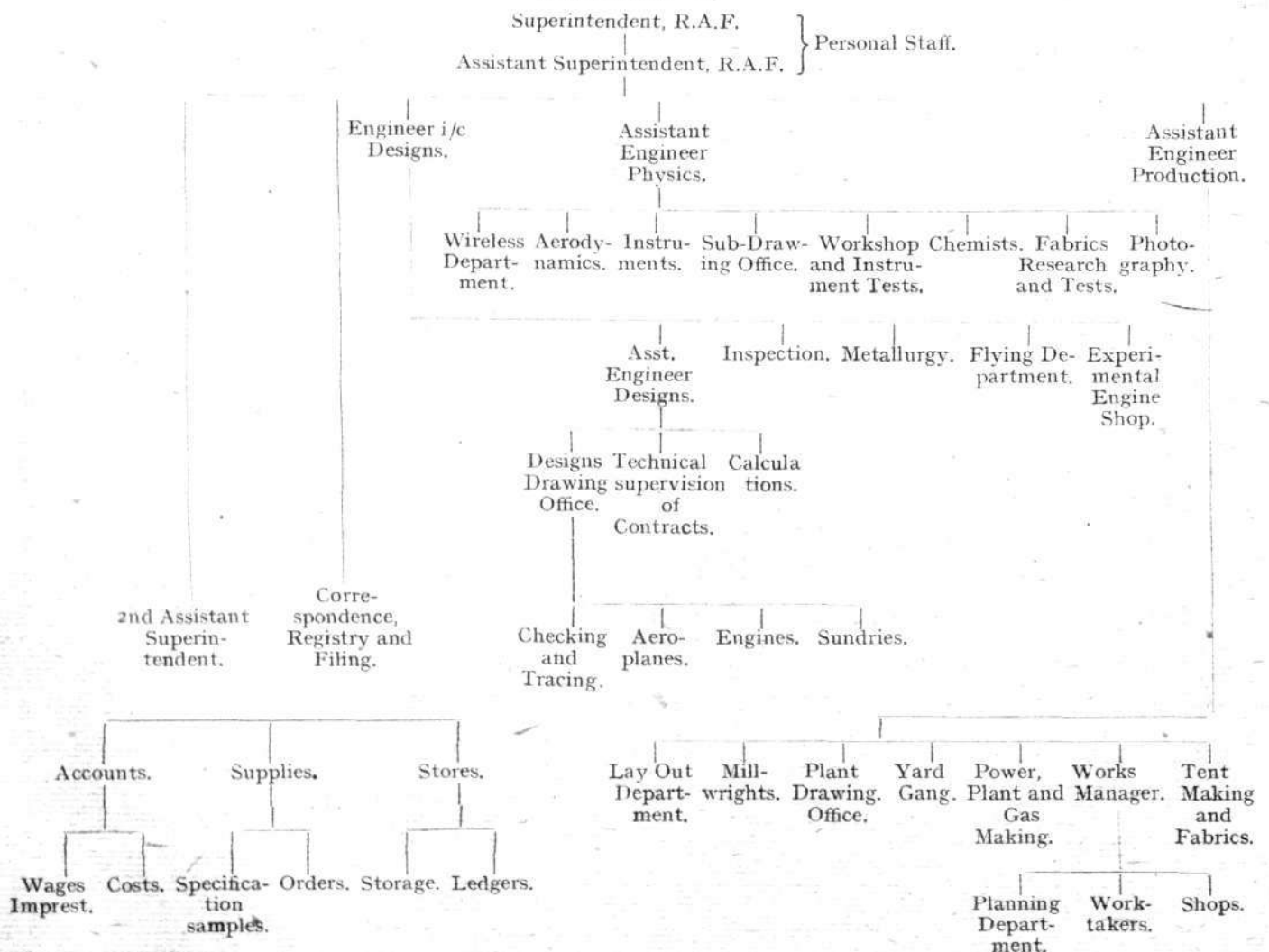
* See footnote on p. 650.

REPORT ON THE ROYAL AIRCRAFT FACTORY.

APPENDIX A.



APPENDIX B.



its recommendations they are not disposed to concur. I will deal with these cases in turn.

On page 650 appears a table of percentages of the "total absorbed by the various classes of work carried out in the Royal Aircraft Factory," the figures of which Colonel O'Gorman is stated to have checked. This table gives the percentage of the work of the Factory devoted to the "construction of aeroplanes" as 35 per cent.

The Board have heard Colonel O'Gorman's evidence in regard to this and have communicated with Sir Richard Burbidge on the subject. As a result of their inquiries, it appears that the figure of 35 per cent. accepted by Colonel O'Gorman represented "new experimental, construction, &c., services," and not "construction of aeroplanes." The proportion of the work which represents actual construction of aircraft is very much smaller, probably less than 10 per cent. This is a misapprehension which it appears very desirable to correct.

The diagram contained in Appendix A to the Committee's Report is also, whether owing to a printer's error or to other causes, inaccurate, and does not quite correctly represent the organisation of the Factory. A correct diagram is appended.*

As regards the measures which should be taken to improve the administration of the Factory, the Air Board have come to the following conclusions, which are in conformity with the recommendations of Sir D. Henderson, and in which they are hopeful that the Army Council will concur.

They do not share the view of the Committee that the Factory should be placed under a Board of Management. Such an arrangement, however suitable for a private factory, would in practice be found ill-adapted to the exigencies of military organisation.

They hold strongly that the Factory should be under the direction of a single Superintendent, possessing the special qualifications of business experience and administrative capacity required for the post.

Colonel O'Gorman has, in their opinion, rendered eminent public service in the design and construction of aircraft, and they think that these abilities can best be employed in the future in the capacity of Consulting Engineer to the Director-General of Military Aeronautics at the War Office.

Under the Superintendent, as now proposed, there should be a head of the Design branch and a head of the Production branch. Every effort should be made to obtain the persons best qualified for these posts.

The Air Board do not share the view of the Committee that a Military Adviser with distinctive executive duties should be attached to the Factory. The functions indicated by the Committee can, in their opinion, be better discharged by the Director of Aircraft Equipment at the War Office.

The Board share the view of the Committee that com-

* Appendix B.

munication between the Royal Aircraft Factory and contractors should be reduced to a minimum. Such communications cannot be entirely suspended, as it is necessary for the Factory to buy materials, but it should not deal directly with those contractors with whom the War Office is in relation.

The Board do not, however, think it necessary to create a post of Controller of Aircraft Supplies for the purpose of acting as intermediary between the Factory and the contractors. These functions can be adequately discharged by the Department of Military Aeronautics at the War Office, as at present constituted.

The proposal of the Committee that the capacity of the Factory should be directed to an increase of the current manufacture of aeroplanes and engines, raises a difficult question. There is no doubt that from a financial point of view such extension is desirable. The larger the proportion of production to experiment, the more creditable will the balance sheet of the factory appear. On the other hand, not only does the present production of the Factory, limited as it is, arouse some measure of suspicion in the minds of private manufacturers, but any such extension in the case of engines is, under existing conditions, impracticable. An increased production of engines could only be obtained if new shops were built. But there is no room for their construction; and even if there were, no output could be obtained in less than 10 months. The object to be aimed at, in the view of the Air Board, is an increase in the output of aeroplanes by an improved organisation of the existing staff. No reduction should be made in the amount of experiment conducted at the Factory. On the contrary, this is the aspect of their work which it is desirable to emphasise by every possible means.

The Board have had under special consideration the question of increasing the output of engines by the trade. Much is being done in this direction, but the limiting factor is not financial assistance, which has not been stinted, but the lack of skilled mechanics. The Board have taken independent action in this respect.

The Committee have not dealt with the allegations, which have been made public, of defective internal administration of the Factory, such as that the workmen employed were inadequately employed or extravagantly paid. The Board have examined this point, but think it best that the complaints on these heads should be referred to the new Superintendent of the Factory, who should make it his duty, at an early date, to report upon them and to remedy any abuses which he may find to exist.

Any measures of reorganisation of the Royal Aircraft Factory should be adopted with the concurrence of the Air Board.

(Signed) CURZON OF KEDLESTON.

July 19th, 1916.

THE R.F.C. INQUIRY.

AFTER having sat in private for several nights, the Committee inquiring into the administration and command of the Royal Flying Corps had a brief public sitting on July 26th.

Colonel Beatty was called in reference to an allegation that Captain Picton Warlow was allowed, or ordered, to fly an old machine which had ceased to be of any value in France, back to this country when the machine was in a dangerous condition to fly in.

Colonel Beatty said that he was present at headquarters when the officer started for England. It was not a question of a man being allowed or ordered to fly back, it was a privilege.

The machine was a two-seater Blériot with an 80 Gnome engine. It was obsolete for use in the field, but by no means obsolete for training purposes. The same type was, he believed, still in use.

He could not definitely recollect how long this actual machine had been in use. To the best of his recollection it was almost new. The type at that time was discarded because it could not climb the height required with a military load. If it was not a new machine, he could say quite definitely that it would have been overhauled. The day, December 20th, was a very good one, and he was told that England could be seen from the aerodrome.

It was clear, but slightly cloudy, with some wind. The machine was not used for field service, but was perfectly suitable for training purposes. The journey on which Captain Warlow started should have occupied not more than 1 hour 20 minutes. If a machine got into the clouds for five or ten minutes the best pilot might miss his bearings; or Channel mists might cause an accident.

The Chairman: When it was decided to discard types of machines which were outclassed by newer types, what was done with the discarded machines?—A machine which could be of real use for training purposes, whenever possible, was flown to England. If a machine was fit to fly across, then the pilot who was coming across was allowed to fly it.

Who decided as to the fitness of the machine?—The officer in charge of the repair section.

Was a test flight made, or was the machine overhauled?—Invariably it was tested to make certain that it would fly. Either the officer in charge of the repair section or the officer who was going to fly would test it.

It would go into the repair shop first of all, and then be tested, and if it was found fit to fly, the officer whose turn it was to come to England might fly it over?—He would get permission to do so.

Asked if he could explain how the accident happened,

witness suggested that the officer might have got into a cloud and lost his bearings, and missed England altogether.

General Sir H. Smith-Dorrien: Are there any other occasions on which men have lost their way similarly?—I know a man who lost his way in a bad snow storm.

Witness added that in the early days of the war a pilot was lost in the same way.

Colonel Beatty read the proceeding of the Court of Inquiry with reference to the death of Captain Downer and Lieutenant Burrows, who were killed whilst flying a B.E. 4 machine, and respecting whose death allegations that they were due to faulty design or bad repair had been made. The evidence at the inquiry was that the machine was making an abnormally steep spiral descent when the strut broke.

In reply to the Chairman, witness said that they only

tested the first machine of a type. As the others came along they were roughly tested by pilots in the air. The first machine of a type was put to very exhaustive tests.

The Chairman: Have you special pilots for that duty?—Yes, specially for that work.

Colonel Beatty said that contractors were given certain formula to which machines must approximate. A certain climb, speed, and load was specified—a practice which had only been instituted during the last year.

The Chairman: And you test the machines with reference to your specifications?—Yes.

Do you find that the machines substantially comply with specifications?—Yes, very closely.

The Committee then sat *in camera*. After the last private sitting on August 1st it was announced that the Report would be issued shortly.

THE ROLL OF HONOUR.

In our last week's issue, by a most regrettable printer's transposition, eight names of officers who have been wounded were classified as "Missing." We express our sincere regret for this slip, and we now repeat the names as they should have appeared under their correct heading of:—

Wounded.

Lieut.-Col. H. C. T. Dowding, R.A., attached R.F.C.
Second Lieut. J. E. Griffith, Dorset Regt., attached R.F.C.
Lieutenant H. R. Hele-Shaw, Royal Flying Corps.
Captain J. U. Kelly, R.F.C. attd. Wilts Regt.
Captain T. E. Longridge, A.S.C., attached R.F.C.
Second Lieutenant W. G. Pender, Royal Flying Corps.
Captain J. C. Quinnell, R.F.A., attached R.F.C.
Lieutenant G. Thompson, Royal Flying Corps.

The Secretary of the Admiralty announces the following casualties:—

Killed.

Flight Sub-Lieutenant Ian N. Carmichael, R.N.

Died of Injuries.

Prob. Flight Sub-Lieutenant William R. Wallace, R.N.

Slightly Wounded.

Flight-Lieutenant Edward H. Dunning, D.S.C., R.N.

The following casualties have been officially announced by the War Office:—

Killed.

Second Lieutenant J. Godlee, Royal Flying Corps.
Second Lieutenant R. W. Settle, Royal Flying Corps.
Second Lieutenant G. N. Teale, Royal Flying Corps.

Died of Wounds.

Second Lieut. J. L. Reid, Northumberland F., attd. R.F.C.
351 Sergeant T. F. J. Carlisle, Royal Flying Corps.

Germany's Aerial Champions.

AN announcement by the German War Office states that the ten most successful German aviators with their records of hostile machines brought down are: Captain Bölke, 19; Lieutenant Immelmann (dead), 15; Lieutenant Wintgens, 11; Lieutenant Höhndorf, 10; Lieutenant Parchau (dead), 8; Lieutenant Mulzer, 8; Lieutenant Baron von Althaus, 8; Lieutenant Leffers, 5; Lieutenant Walz, 4; Lieutenant Gerlich, 4.

Lieutenant Parchau, who was recently decorated with the Order Pour le Merite, was killed in a fight with a British machine on July 24th, being shot through the heart. The machine, it is said, fell into the German lines.

Zeppelins Patrolling the Jutland Coast.

REPORTS from various places in Jutland report the passing of Zeppelins each day during the past fortnight. On July 27th one was observed patrolling between the island of Romo (Prussia) and Horns Reef for two hours, when it disappeared in a westerly direction. No doubt a dual purpose is being served by this journeying about—practice for visits to hated Britain's shores and scouting for the cooped-up German Navy.

Zeppelins by the Dozen.

ACCORDING to the *Morning Post* correspondent at Stockholm, reports from Gothland indicate that the fleet of 12 Zeppelins which passed to the east of that island on the night of July 27th headed for the Gulf of Finland, as it

7131 2nd Class Air-Mechanic F. E. T. Sanders, R.F.C.
6261 2nd Class Air-Mechanic J. Simpson, R.F.C.

Wounded.

Captain R. Blatherwick, R. Scots Fusiliers, attd. R.F.C.
Second Lieut. C. V. J. Borton, Norfolk Regt., attd. R.F.C.
Captain M. G. B. Copeman, Leicestershire and R.F.C.
Second Lieut. D. H. S. Davies, R. Warwickshire and R.F.C.
Lieut. B. McL. Hay, Canadian Engineers, attd. R.F.C.
Second Lieutenant F. G. Hogarth, Royal Flying Corps.
Second Lieutenant R. Holloway, Royal Flying Corps.
Second Lieut. H. S. Macneil, R.F.A., attd. R.F.C.
Second Lieutenant J. Manley, Royal Flying Corps.
Lieutenant E. R. Manning, Hussars, attached R.F.C.
Second Lieutenant L. L. Richardson, Royal Flying Corps.
Second Lieut. C. G. Riley, Royal Fusiliers, attd. R.F.C.
9138 2nd Class Air-Mechanic W. R. Morton, R.F.C.

Correction:

Wounded.

Second Lieut. W. E. Birch, E. Lancs. Regt., attd. R.F.C., should read
Second Lieut. W. E. Birch, S. Lancs. Regt., attd. R.F.C.

Missing.

Second Lieutenant R. M. W. Browne, R.F.C.
Lieut. N. A. Browning-Paterson, R.A., attd. R.F.C.
Lieut. H. Clements-Finnerty, Lancers, attd. R.F.C.
Captain J. O. Cooper, Royal Flying Corps.
Lieutenant H. R. Hele-Shaw, Royal Flying Corps.
Second Lieutenant D. S. C. Macaskie, Royal Flying Corps.
Second Lieutenant R. C. Oakes, R.F.A., attd. R.F.C.
Lieut. A. V. Oliver-Jones, R.F.A., attd. R.F.C.
Second Lieut. A. H. W. Tollemache, R.E. and R.F.C.
2458 Corporal R. G. Johnstone, Royal Flying Corps.

Correction:

Missing.

Lieutenant J. L. Whitby, Leinster Regt., attached R.F.C., should read—Lieutenant J. L. Whitty.

was observed that a somewhat easterly course was taken by them. The airships travelled partly in couples and partly in single file. It is supposed that they were fired on by warships, as soon after they had passed Gothland, heavy firing was heard in the direction in which they had gone. A telegram from Landsort states that on July 28th a Zeppelin, supposed to be one of the same fleet, was seen close to the Swedish shore, evidently making for Åland. The *Dagens Nyheter* is of opinion that the main body of the airship fleet was making for the Russian naval base in the Gulf of Finland, and that while each unit had a definite goal they were all co-operating with the view of damaging the Russian ships and fortifications and breaking the power of the Russian naval offensive in the Baltic.

A Zeppelin Record.

WRITING on July 29th the *Morning Post* correspondent at Stockholm says:—

"A message from Landsort states that a Zeppelin, which was sighted last night on its way north, passed here at 11 a.m. to-day, heading south. The same telegram states that the airship visited Åland Island, where it was fired at, but escaped unhurt. The Swedish newspaper *Aftonbladet* makes a calculation as to the time and distance covered by the airship on this voyage in comparison with the time and distance of the airship raids on England, and arrives at the conclusion that a new record has been established in this instance."

AIRISMS FROM THE FOUR WINDS.

PILOT L. L. KING, of the Beatty School, has recovered from his rather nasty accident of a short while ago, and had the pleasure of taking Mrs. Beatty up for her second flight in England on Friday.

THE Smiles-Sykes looping contest runs apace. Sykes is now in the fifties, and Smiles, stealing various marches on his opponent, now totals one hundred and sixty-one.

CURIOUS that neither the Martinsyde nor the L. and P., the two 'buses referred to above, will tail-slide. Both appear to stand on their respective tails whilst the weight of the engine pulls the nose of the machine earthwards.

"SMILES' double two" is not, as might be supposed, a telephone number, but has reference to the record put up by pilot G. M. Smiles, on the L. and P. On Tuesday of last week he looped the loop 22 times in succession. In the face of such a whirling, his twelves and fifteens sink into the commonplace.

THE P.B. "Sparklet" was sparkling in the sunlight again on Sunday.

AN out-and-home sporting contest between the "Sparklet," the de Havilland, the Bristol "Bullet" and the Sopwith would be an event worth watching. Is it possible?

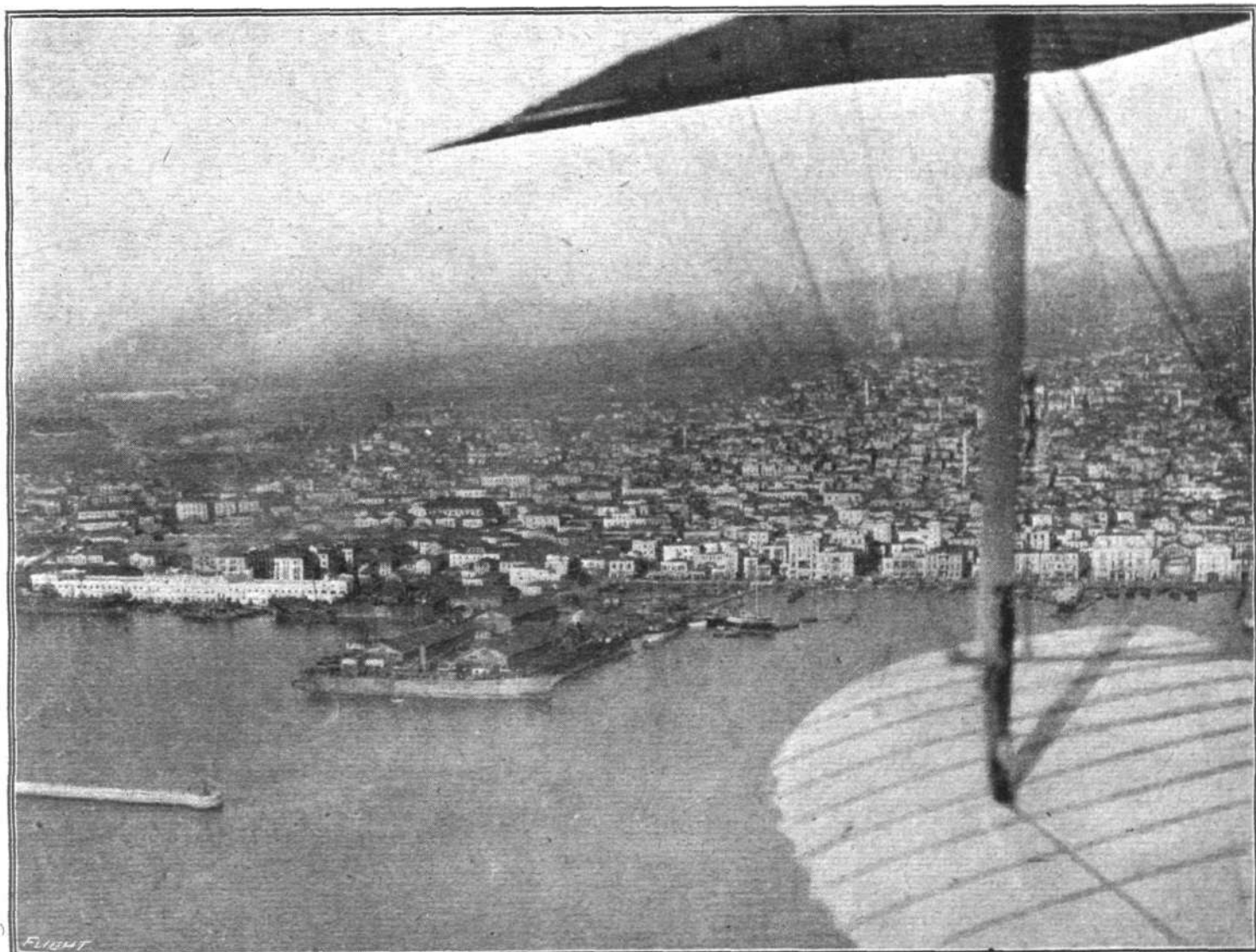
CATTLES have now taken premises in Kilburn, near Cricklewood Lane. Worth noting, seeing the way things aviatric are drifting Hendonwards. Also convenience in quick delivery, owing to proximity of works, is something in these days of hustle.

PILOT-INSTRUCTOR OSIPENKO is making satisfactory progress after his very nasty crash of two weeks ago. Unfortunately, his legs are pretty seriously damaged, and recovery must of necessity be slow. We tender him best of wishes.

THE opening of the Princess's Theatre at the Vickers' village at Crayford by Princess Christian on July 26th, when the Princess was received by Mr. Albert Vickers, the chairman of the company, reminds one that the Vickers' firm are ever alive to the happiness of those around them, this being but one instance of the care which the directors of Messrs. Vickers, Ltd., have for the welfare of their employees. Not only have they already in operation a similar theatre at Walney Island, where first-class music may be heard and first-class plays and films seen, but at the Vickers' aeroplane works at Weybridge there is a canteen, which in 10 minutes can be transformed into a picture theatre with stage and all complete, and can be changed back to a canteen in a similar space of time.

EVER mindful of their clients' requirements, Messrs. Robinson and Cleaver, the Naval and Military tailors, of Regent Street, have thoughtfully produced a useful little clip case for boxes of safety matches. The clips, which are made in oxydised metal, have an embossed Air Service badge on the side.

ON Sunday, with the thermometer registering well over the hundred mark, two Naval pilots had a welcome ducking in the waters of the "Welsh Harp." The machine, an Admiralty B.E., shed a wheel, unknown to the pilot, on



WITH THE BRITISH FORCES IN SALONICA.—The city, as seen from a British seaplane flying over Salonica Bay. (Official photograph issued by the Press Bureau.)

taking off at Hendon. When descending for *terra firma* some minutes later, he was made aware of the state of things by those in the aerodrome hurling frantic signs at him, whilst waving the roving wheel aloft. Returning "upstairs" to think matters over, the pilot chose the lesser of two evils, and made a beautiful *vol plané* into the Brent Reservoir. Pilot and passenger escaped with nothing worse than an impromptu swim, and the machine was quickly towed to the side, practically undamaged. Although aeroplanes are prohibited using the Brent Reservoir for purposes connected with aviation, probably the authorities will also think matters over before taking action on the present occasion.

THE spectre of "Professional Jealousy" hid itself behind the sheds and looked round the corner, when a neat little act of good fellowship was enacted by the British Caudron company at Hendon on Sunday. An A.I.D. officer had occasion to proceed to Farnborough to stamp an Aircraft company's machine leaving for overseas at once. Hendon to Farnborough on a Sunday afternoon by railway is *not* the most convenient form of recreation. With a promptness which heightened the good feeling existing, Director A. M. Ramsay placed one of his new Renault Caudrons, with René Desoutter as pilot, at his disposal. Judging by the faces of the two on returning, the trip must have been most enjoyable, and those of us sweltering on the ground longed for the opportunity of such a cooler, only more so.

THE new Beatty monobloc four, 50/60 gives 63, on the bench, and turns over at 1,800. It has now run for 27 hours without trouble, and hardly any vibration. But more of this next week, possibly with photographs.

MR. H. AUSTIN is one of the members of the Committee appointed by the Minister of Munitions to draw up a scheme for workers' holidays.

PETROFIN is the name of a new white oil which is being offered by the Anglo-American Oil Co. for use in bi-fuel carburettors.

AIRCRAFT and their work are responsible for the bringing to light many legal anomalies. In the House of Lords last week it was held that there is no obligation upon a company—to wit, the Great Central Railway Co.—to illuminate in these nights of darkened streets the posts in the roadway approaches to their stations to a degree sufficient to enable a driver to avoid a collision. The judgment came about in the case of an appeal against a decision of Mr. Justice Darling and the Court of Appeal. A taxi-cab driver sued the company for negligence in view of the darkened streets for not painting the gateposts at Marylebone Station white and placing lanterns on them.

THE Freshfield Building Estate, Millbrook, Southampton, was recently advertised for sale by auction in "FLIGHT." From the auctioneer, Mr. William B. Hill, we learn that the property changed hands at a satisfactory figure. It is a good district for aeronautical constructors.

MR. CHARLES LE MAISTRE, A.M.Inst.C.E., M.Inst.E.E., who has been in charge of the work of the Electrical Section of the Engineering Standards Committee since 1903, has been appointed secretary to the Committee in succession to the late Mr. Leslie S. Robertson, M.Inst.C.E., who was lost with Lord Kitchener in the disaster to H.M.S. "Hampshire" whilst on an important Government mission.

THE "Bad for the Coo" opposition to the locomotive saying of Stephenson's has again been, in a way, simulated in connection with aircraft. An aeroplane presented by the Indian Rajahs was compelled to descend at Chertsey owing to engine trouble whilst on a journey from the Midlands to France. The wing was slightly damaged, and the propeller broken in a remarkable manner. A dog dashed at the propeller as the machine was running along the ground at high speed, and was instantly killed, whilst the propeller was smashed.

THAT was a curious, not to say unpleasant, experience which is reported from Harborne last week, when an aeroplane in flight came in contact with a flock of pigeons. The propeller was broken, and the machine forced to descend close to the main road. Luckily neither the airman nor the observer was hurt.

Dogs and pigeons should, indeed, be a bit more circumspect.

A SIGN of the times and a chance for relic hunters is to be found in the following advertisement which appeared in the *Times* on July 27th:—

"ZEPP.—RELICS and Parts of Framework of recently captured ZEPPELIN, to be SOLD separately. Existing offer £45 for framework. Highest offers.—Box T. 183, the *Times*."

WHAT, we wonder, think now the wise critics of days ago who would have it that looping the loop was a mere acrobatic senseless, and useless circus performance. An illuminating sidelight upon its possibilities emerges in a paragraph in the R.N.A.S. report of the "incident" on July 15th, when one of our aeroplanes successfully downed a German seaplane. And this is how he did it: "The enemy manoeuvred for a position behind and below the Nieuport, both machines meanwhile executing a steep glide. The British pilot thereupon looped over the enemy, who passed underneath him. He thus gained the desired position behind and opened fire into the seaplane at a range of 100 yards. The German pilot, who was evidently hit, made a vertical nose-dive. The machine was last seen in flames, falling headlong downwards."

CONGRATULATIONS to Second Lieutenant McCubbin on his D.S.O. for putting up the number of the German Fokker crack, Immelmann.

THE latest stunt aviatric of the Germanic combination is the establishment of a "Balkan Aerial Express" from Berlin, via Vienna and Budapest to Constantinople. Good luck to the enterprise, as, if it is carefully carried out, it should presently come in very handy for the Allies as a ready-made organisation for the easy communication of our army of occupation in the Central Empires.

"THE R.F.C. have carried out several bombing raids and dropped seven tons of bombs on the enemy's communications and billets."—*General Headquarters (France) report, July 31st*. Not so bad, and there was lots more air work in the same despatch, for what is described as "a quiet day"!

WELLS AVIATION CO. DEVELOPMENTS are looming large. Already their workers total over the half thousand, and more extensions still are on the way—Chelsea way. And not satisfied with this, the company are shortly blossoming forth in the country near to that delightful town, Chichester. They will probably need all the space they can get, as in addition to their Government work and the Benoist boat agency, they have taken over the representation of the well-proved Roberts aviation engine. Messrs. Wells, Doyle Jones, and their co-workers, have reason to be proud of the outcome of their joint efforts out of such very small constructional beginnings.

TIME is money is an old adage. Probably no truer word has ever been spoken. By accurately recording time in a factory, small or large, it is astounding what, at the end of a year, a difference is totted up in wages earned or lost by the neglect of that daily few minutes, which doesn't matter, so the slacker maintains. In times old-fashioned it was held that the recording of these unconsidered trifles off working hours cost more than the amount saved thereby, justified. And we are not sure the "ancients" were not right. Now that is all changed, and the wonderful automatic time recorders which every up-to-date establishment should have as one of its first requirements, does the whole business, as it were, on its own. No cost but the prime cost, and these machines save this in a fraction of time by their accuracy in action, whilst another "compensator" of no mean order is that, however convinced a man may be that he *was* "on time," when the clock recorder vouches for his time all dispute vanishes, all of which leads to harmony between employer and employee. Time was when British makers knew nothing of these. Now the Gledhill-Brook time recorders standing out as "all British" receive the respect from foreign makers which all high-class work must command. There may be firms in association with aviation still without one of these indispensables, in which case we would strongly recommend a communication to the Gledhill-Brook firm at either 26, Victoria Street, Westminster, 43, Market Street, Huddersfield, or at 44, Hill Street, Birmingham.

ANOTHER accession to those making Aircraft Fittings and Components is the Osborne and Creighton Aircraft Company of 33, Chatham Road, Norbiton, Surrey. Contractors and sub-contractors should note and communicate with the firm.

Personals

Casualties.

Second Lieutenant CECIL HENRY COXE, R.F.C., aged 18, was the youngest son of Mr. H. R. H. Coxe, formerly of the Indian Civil Service. He was educated at Bilton Grange, Marlborough, and Balliol, where he gained a History Exhibition in December, 1914. On attaining his eighteenth year he applied for a commission in the R.F.C., which he obtained in December, 1915. He gained his "Wings" in May, and went to the Front at once. On July 1st he was sent with a detachment to attack a railway centre in rear of the German lines. On his return, after carrying out his orders, he was shot down, and died the same day in a German field hospital.

Lieutenant A. V. OLIVER-JONES, R.F.A., attached to Royal Flying Corps, who was reported missing, it is now announced, has been killed during an air raid. He was acting as observer on an aeroplane that was hit by anti-aircraft guns, and fell 9,000 ft. He was well known in Tunbridge Wells, where his relatives reside. Early in the war Lieutenant Oliver-Jones was seriously injured in the hand by an explosive.

Second Lieutenant REGINALD WILLIAM SETTLE, R.F.C., who was killed on July 23rd while flying over the German lines, was the eldest son of Mr. and Mrs. Joel Settle, The Hill, Alsager. He was educated at Elleray Park, Wallasey, and Radley College, Oxford. Mr. Joel Settle, who is the managing-director of the firm of Messrs. Settle and Speakman, colliery agents and factors, is well known in commercial circles in Birmingham and the Midlands. Second Lieutenant Settle, who was 25 years of age, joined the Motor Transport Section as a private in November, 1914. He was engaged in driving the motor car of Sir William Robertson when he was Quartermaster-General, and afterwards when he was Chief of the Staff. On General Robertson's return to England, Second Lieutenant Settle, who had been promoted to sergeant, was given charge of the motor cars of General Sir Douglas Haig at his headquarters. He obtained a commission in the R.F.C. in June.

Lieutenant GUY NEVILLE TEALE, R.F.C., killed on July 20th, aged 19, was the only son of Mrs. Teale, of 37, De Vere Gardens, W. He was born in 1896, and educated at Charterhouse. On the outbreak of war he enlisted in the Public Schools Brigade, obtaining a commission in the 8th Buffs in November, 1914. In April, 1915, he transferred to the R.F.C., and took his wings in June of that year. In November he went to France with a squadron. A few days before his death, on promotion, he was transferred to another squadron, on which occasion his squadron commander wrote: "He has done me awfully well, and has put up some splendid shows. One of his best efforts was just before he left. He went on a night bombing expedition and came down to 300 ft. to attack a searchlight which was turned on him. They fired on him very heavily, hitting his machine and engine . . . but he defeated them and put out the light with machine-gun fire. It was an excellent show, and one of which he and his observer may be very proud." He had been promoted Flight-Commander and Captain, although he had not yet been gazetted. On his death the commander of his squadron wrote: "It may perhaps help you a little to bear his loss when I tell you that the duty on which he was killed was one for which he had volunteered."

Captain DAWYCK MOBERLY VEITCH, 1st D.Y.O. Lancers, attached to R.F.C., was the younger son of the late Andrew Veitch, of the Hongkong and Shanghai Bank. He was educated at Bedford Grammar School, and at Uppingham. He was on leave in England when war broke out, and went out to France attached to the 9th Lancers early in September, 1914, and in the November was transferred to the 4th Dragoon Guards. He was invalided home in December, 1914, and in January, 1915, joined the R.F.C. as Observer. In February, 1916, he was asked to qualify as a pilot, and after some months' work in England returned to France on June 28th. While he was flying on a reconnaissance on July 8th both wings of his machine were blown off, and it is believed he was killed.

Lieutenant JOHN LEO WHITTY, Leinster Regiment, attached R.F.C., officially reported missing, is now stated to have been killed by an anti-aircraft shell during a reconnaissance over the enemy's lines on July 8th. Born at Cape Town in 1894, he was the third son of Lieutenant-Colonel M. J. Whitty, R.A.M.C. He was educated at Castleknock, and the Jesuit College, Liverpool, and was gazetted from Sandhurst to the Leinster Regiment in February, 1913. He joined the 1st Battalion at Fyzabad in the following September, and after the outbreak of war returned with it from India to France. He was wounded at the retaking of the village of St. Eloi on March 15th, 1915, in which action the 1st Leinster Regiment especially distinguished itself. He was highly commended for his coolness and courage in every emergency, and was mentioned in Despatches, and awarded the Military Cross the following June. His three brothers are at the Front.

Wounded.

Second-Lieutenant T. H. M'DOWELL, R.F.C. who was recently severely wounded in the shoulder by shrapnel, was a son of Mr. Thomas M'Dowell, Helen's Bay (of Messrs. Dunville's), and joined the Army originally as a despatch rider. He was subsequently gazetted to a commission in the Royal Garrison Artillery, and transferred last February to the Flying Corps. He was in hospital for several weeks, but has made a good recovery.

Missing.

Mr. and Mrs. A. E. Wilson Browne, of The Crag, Sutton Coldfield, have been notified that their son, Second Lieutenant ROLAND MURRAY WILSON-BROWNE, R.F.C., is reported missing. Second Lieutenant Wilson-Browne, who is 19 years of age and obtained his "Wings" at the beginning of last May, was educated at Solihull Grammar School and King Edward's School, Birmingham, and distinguished himself at the latter place by winning the gymnastic championship in three successive years. A brother officer, in a letter to Second Lieutenant Wilson-Browne's parents, states that he went up on a bombing raid on July 21st and did not return, but when last seen was descending with his machine under control. It is therefore assumed that he has been taken prisoner.

Married and to be Married.

The marriage of Captain VIVYEN DAVIES, A.S.C. (attached to R.F.C.), and ENID, only daughter of Mr. and Mrs. WAREHAM SMITH, of 91, Upper Tulse Hill, S.W., took place on Tuesday last at St. Bede's Church, Clapham Park.

QUESTIONS IN PARLIAMENT.

Air Service Requirements.

MR. PETO, on July 25th in the House of Commons, asked the Minister of Munitions if he is satisfied that all the establishments controlled by his Department which manufacture any of the requisites for the Air Service are fully engaged; whether any such establishments have repeatedly asked for further orders and obtained no reply for many weeks, and then of a negative or delaying character; and whether he will consider the establishment of a travelling supervisor of Air Service work, with a view to obtaining the maximum results?

Major Baird (representing the Air Board): Establishments engaged on aircraft work are as a general rule employed to their full capacity, the object aimed at being to place new orders a sufficient time in advance of the completion of the previous contract to enable all material to be obtained for commencing work on the new order as soon as the old order is completed. It is not, however, practicable in all circumstances to adhere to this rule, as to do so would often involve giving orders for aircraft of types already becoming obsolete in preference to newer types which may be under consideration or trial. I am not aware of any cases such as are

suggested in the second part of the question, but if my hon. friend will bring any such to my notice, inquiry will be made into them. The Admiralty and War Office already have travelling officers to supervise contract work on aircraft, and it is not considered that the creation of an additional travelling officer would serve any useful purpose.

Royal Aircraft Factory.

MR. BROOKES in the House of Commons on July 31st asked the Secretary of State for War what action he proposes to take on the Report of the Committee of Inquiry into the Royal Aircraft Factory at Farnborough?

Major Baird (representing the Air Board): The action which it is proposed to take will be on the lines indicated in the Report of the Air Board to the War Committee which was recently published with the Report of the Committee of Inquiry.

Protection Against Enemy Air Raids.

MR. BROOKES asked whether, in view of the possibility of further enemy air attacks on this country during the autumn, steps have been taken to complete the air defences of the country; and whether perfect co-ordination now exists between all branches of the two Services?

Major Baird: The development of the air defences of the country has made great progress, and is proceeding as rapidly as the manufacturing output and the needs of our forces abroad permit. In regard to the second part of the question, the hon. Member may rest assured that all possible steps are taken to secure co-ordination between the various branches concerned.

The Flying School at Simla.

MR. W. ROCH asked whether a scheme for a Flying Corps was prepared by the staff at Simla prior to the war; and, if so, whether such scheme was put into force?

Mr. Chamberlain: The establishment of a flying school was sanctioned in 1913. A few machines were supplied, and additional machines were on order when war broke out. Both the machines and the personnel were then transferred to the War Office at their urgent request.

The Air Service in India

MR. WALTER ROCH asked the Secretary of State for India how many Army aeroplanes were in India at the outbreak of war?

Major Baird: I shall be happy to supply this information to the hon. Member privately, but I do not think that it would be in the interests of the country that the number should be publicly stated.

Mr. Pringle: On what ground should it not be publicly stated now, nearly two years after the outbreak of the war?

AIRCRAFT WORK AT THE FRONT.

OFFICIAL INFORMATION.

British.

General Headquarters (France), July 27th, 10.15 p.m.

"Some good work was accomplished by the Royal Flying Corps on the 26th in locating the enemy batteries and newly-constructed defences. Owing to the clouds and mists our machines had to fly low, and two of them are missing."

General Headquarters (France), July 28th, 10.15 p.m.

"Two hostile aeroplanes were destroyed by one of our aerial patrols in the neighbourhood of Bapaume yesterday."

General Headquarters (France), July 29th, 10.30 p.m.

"Three enemy aeroplanes were destroyed yesterday, and a German kite balloon was seen to fall in flames."

General Headquarters (France), July 30th, 11.12 p.m.

"Three hostile aeroplanes were destroyed yesterday, and several others were forced to land in a damaged condition."

General Headquarters (France), July 31st, 10.15 p.m.

"The Royal Flying Corps have carried out several bombing raids, and dropped seven tons of bombs on the enemy's communications and billets."

"In one case a train was blown up, in another an ammunition depôt was set on fire, and a hostile aeroplane on the ground was destroyed."

"There were many aerial combats, and several enemy machines were driven to the ground in a damaged condition."

"Three of our machines are missing."

French.

Paris, July 25th. Afternoon.

"On July 22nd Sub-Lieutenant Nungesser brought down his tenth German aeroplane."

Major Baird: On the ground that it is contrary to the public interests to make any statement in regard to our preparations for war.

Mesopotamia Aeroplane Force.

MR. ROCH asked the Secretary for India how soon after the landing of our troops in the Persian Gulf our Army was supplied with an aeroplane force?

Major Baird: This matter forms part of the larger question of the equipment of the Mesopotamia Field Force, which is to be the subject of inquiry by a Special Commission. I do not think that it can be satisfactorily dealt with in an answer to a Parliamentary question.

Air Raids and Lighting Regulations.

MR. BENNETT-GOLDNEY asked the Secretary of State for the Home Department if his attention has been drawn to the strict manner in which the lighting regulations are enforced in certain areas and to the lax manner in which they are barely enforced in others, even approximately, close to them; if it is realised by the authorities that many central street lamps in the streets of London are permitted to reflect large brightly-illuminated patches on the roads, that such lights are easily seen from above, and that they render the finding of certain localities less difficult; whether, now that the time of year is fast approaching when Zeppelins are most likely to indulge in their activities, he is aware that certain top windows of the Foreign Office have been recently allowed, in the neighbourhood of the official residences, to be brilliantly illuminated without blinds being drawn; whether his attention has also been called to the virtually unscreened lights permitted at Wellington Barracks, while similar lights are not permitted either in the neighbouring palace or in private houses; and whether he will consider the possibility of arranging for greater uniformity both in restrictions and permissions?

Mr. Samuel: Where the local authorities are so many and the methods of illumination so various as in the Metropolitan area it is extremely difficult to secure complete uniformity, but numerous experiments have been made as to the best method of obscuring street lamps so as to obtain an approximation to uniformity and to prevent undue illumination of the ground. Measures are now in contemplation for the introduction of certain improvements in the existing arrangements. Bright, unscreened lights are not allowed at the places mentioned, and, if they are observed, steps will be taken to deal with the matter.

Lord Hugh Cecil: Is great care taken to ascertain the opinion of those who are expert aviators as to what is visible and what is not?

Mr. Samuel: The police are in constant communication with those who have got experience.

"During the night of the 24th-25th one of our air squadrons bombarded the railway stations of Pierrepont and Longuyon and some bivouacs near Mangiennes."

Paris, July 26th. Afternoon.

"During the night of July 25-26th one of our air squadrons dropped forty bombs of 110 mm. and two of 200 mm. on the military establishments at Thionville and Rombach, after which the squadron set out again before dawn to bombard an important munition depôt near Dun. Thirty-eight bombs were dropped on this objective. The same night 29 bombs were dropped on the stations of Vilosnes and Briailles and bivouacs near Dannevoix."

Paris, July 27th. Evening.

"At about 10.45 this morning three enemy aeroplanes dropped bombs on Cr dy-en-Valois. Three women were wounded and one girl was killed."

Paris, July 28th. Afternoon.

"In the course of yesterday our pursuit aeroplanes were engaged in numerous fights. Two German aeroplanes were brought down in the region of the Somme, one near Brie, and the other in the neighbourhood of St. Christ. A third enemy machine was attacked by one of our aeroplanes and brought down at Vrille, to the south of Ornes (region of Verdun). A German Aviatik machine attacked in the Vosges and forced to abandon the fight, overturned in landing."

"On the night of July 26th-27th one of our air squadrons dropped heavy calibre bombs on the railway lines to the north of Tergnier, on the station of Chauny, and on enemy convoys

on the road in the neighbourhood of Coucy. Our aeroplanes also bombarded between Laon and Rheims the military establishments at Menneville and Lavannes-Caurel."

Paris, July 28th. Evening.

"This morning our aeroplanes pursued a German air squadron in the region of Verdun. Several fights took place, in the course of which one of the enemy machines was forced to come down in our lines. The two officers who were in it were taken prisoners."

Paris, July 29th. Afternoon.

"In the morning of July 27th a French aeroplane, piloted by Qr.-Mr. de Terline, attacked a German machine which was flying over Chalons. The French pilot had just opened fire when his machine-gun jammed. The enemy was in full flight. Two of our machines then saw Qr.-Mr. de Terline swoop upon his adversary at full speed, crash into him and fall with him to the ground. The French pilot and the two German airmen fell within our lines and were killed. Qr.-Mr. de Terline had already brought down two enemy machines, and had just received the Military Medal.

"In the region of Amiens our pursuing aeroplanes fought 34 battles, in the course of which five enemy aeroplanes were forced to land in a damaged condition. A sixth German aeroplane was brought down between Chaumes and Roye.

"In the night of July 28th our bombarding squadrons carried out a number of operations; 207 shells in all were dropped on bivouacs, depôts and railway stations on the enemy's front."

Paris, July 30th. Afternoon.

"Yesterday our machines were engaged in 11 fights on the Somme front. Three German machines were brought down, and a fourth machine attacked by one of our aeroplanes was dashed to pieces within the German lines in the Argonne. It is confirmed that one of the German machines previously reported as seriously damaged in the course of the aerial fighting on the Somme front was, in fact, brought down by Second Lieut. Guynemer, who thus brought the number of German aeroplanes which he has driven down to 11. In the course of Saturday night 40 bombs of 120 kilos. were dropped on enemy railway stations in the Noyon district. This morning one of our bombarding squadrons dropped several heavy bombs on the railway station and military establishments at Mulheim (right bank of the Rhine)."

Paris, July 31st. Evening.

"During the night of July 30th-31st one of our squadrons bombarded the military factories of Thionville, the stations of Conflans and Audun Le Roman, as well as bivouacs in the region of Etain."

Russian.

Petrograd, July 25th.

"Two German aeroplanes flew over our positions in the district north of Lutsk and threw some bombs, but without causing any damage.

"On July 24th, to the west of Burkanow (on the Strypa), at about 8 o'clock in the evening, one of our aeroplanes was hit by the enemy's artillery fire, caught fire and fell in the enemy's front line. It is supposed that the gallant aviators, Staff Captain Berize and Lieutenant Ritcheff, perished as heroes."

"Caucasus.—The Turkish armies are retreating in disorder before the irresistible pressure of our troops, some of whom are already only 10 miles from Erzincan, in which, according to the reports of our aviators, the Turks are hurriedly piling together all kinds of provisions."

Petrograd, July 26th.

"Six enemy airmen threw 32 bombs on Zamiri Station. Eleven aeroplanes also threw 71 bombs on the station of Pogorjelze."

Petrograd, July 27th.

"On July 25th at 2 o'clock in the afternoon a Zeppelin dropped some 15 bombs in the mouth of the Gulf of Finland, and on the outskirts of the town of Abo (on the Aland Islands) without causing any damage to the ships or on shore. Being fired at by our batteries, the Zeppelin withdrew in a southerly direction.

"On the same day eight enemy seaplanes attacked our seaplane station, dropping about 100 bombs. Two of our seaplanes which engaged the enemy in battle succeeded in hitting one enemy machine, which caught fire."

Petrograd, July 28th.

"In the region of Krevo our artillery brought down an enemy aeroplane, which fell in his own lines."

Petrograd, July 29th. Afternoon.

"Yesterday a squadron of 10 of our aeroplanes made a successful raid on Baranowitschi."

"North of Lake Miadziol, Lieut. Tomson, flying a Nieuport machine, chased an enemy Albatros which was flying over the township of Vudslaff and pursued it as far as Kobylniki, where the Albatros disappeared in a north-westerly direction, while Lieut. Tomson, after having subjected an enemy camp near the Kobylniki aerodrome to the fire of his machine gun, returned safely to our lines."

Petrograd, July 29th. Evening.

"Hostile aeroplanes flew over the region of Loguischin and Manewitchi Station, where they dropped some bombs."

Petrograd, July 30th. Afternoon.

"Over 12 German aeroplanes made a raid on Dwinsk, dropping about 40 bombs. Twelve of our machines, in spite of enemy fire, engaged the German aeroplanes, and pursued them, the latter taking to flight. Cavalry Capt. Kosakoff, attached to the Flying Corps, overtook one of the German machines, and after a fierce encounter brought it down. We had no losses. One of our air squadrons bombarded the railway station of Jelowka. East of Baranowitschi we brought down an enemy aeroplane. We captured the enemy aviators, who belonged to the 35th German Air Detachment. The machine was burnt."

Petrograd, July 31st.

"Enemy aeroplanes have dropped bombs on the stations at Zamire and Isiaslav."

Italian.

Rome, July 25th.

"Early in the morning of the 24th hostile aircraft dropped bombs on S. Giorgio di Nogaro and other places of the Lower Isonzo. No harm was done, except that one farmhouse was burnt."

Rome, July 26th.

"In the Trevignolo Valley our aircraft bombarded the enemy parks and depôts at Bellamonte."

Rome, July 28th.

"Our aircraft renewed the bombardment of enemy parks at Bellamonte.

"Hostile aeroplanes yesterday dropped bombs on Bari, Mola di Bari, Molfetta, and Otranto. At Bari there were only two wounded, at Molfetta five persons were killed and 20 wounded, while at Otranto there were no victims and no damage was caused.

"Some persons were slightly injured at Mola di Bari, and a few buildings suffered trifling damage. Despite the fact that the hostile machine flew at a great height, some were hit by the fire of our batteries."

Rome, July 29th.

"On the Carso one of our squadrons bombarded the enemy's camp and park in the Appacchiasella region. Hostile aircraft, which counter-attacked, were driven off, one of them being brought down in flames."

German.

Berlin, July 25th.

"Lieutenant Baldumus shot down a French biplane south of Binarville, thus putting his fourth enemy machine out of action."

Berlin, July 26th.

"Two enemy aeroplanes were brought down in our lines north of the Somme by infantry and machine-gun fire. One fell to earth in a burning condition after an aerial fight near Lunéville. On Monday a French biplane was shot down in the direction of Fort Souville by a direct hit from our anti-aircraft guns.

"By means of bombs and machine-gun fire our airmen brought enemy transport trains to a standstill on the line Dvinsk-Polotsk and east of Minsk.

"German air squadrons abundantly and successfully bombed the railway stations at Pogoryeltsy and Gorodyeya (on the Minsk line), which were full of troop transports. Bombs were also dropped on troops camping near by.

"Yesterday evening one of our seaplane squadrons attacked and bombed the Russian aerodrome at Zerel, on the Island of Oesel (Gulf of Riga). The aeroplane sheds and Russian aeroplanes ready to ascend were hit. In spite of bombardment by enemy torpedo-boats and battle aeroplanes, the attack was carried through according to plan, and all our airmen returned to their bases.

"On July 24th, in the afternoon, north of Zeebrugge, a British biplane was shot down by one of our submarines and forced to descend to the water. The occupants, two officers, were captured by one of our aeroplanes and then brought

back with their machine to a torpedo-boat, which took them to Zeebrugge."

Berlin, July 27th.

"A French biplane was shot down in an aerial fight near Beine (east of Rheims)."

Berlin, July 28th.

"One of our naval airships on July 25th executed an attack on the main base of the Russian and the British submarines at Mariehamn, in the Aland Islands, successfully dropping on the harbour works there 700 kilogrammes (1,540 lb.) of explosive bombs.

"Despite a heavy bombardment from enemy guns, the airship returned to her shed undamaged."

Berlin, July 29th.

"An enemy aeroplane near Roclincourt, north of Arras, was shot down by a direct hit from an anti-aircraft gun.

"Our aviators (with Marshal von Hindenburg's armies) repeatedly attacked enemy troops, transport trains, and railway buildings with success.

"A Russian aeroplane was shot down in an air fight south of Perespa.

"On Thursday the Russian air station at Lebara-on-Zerel was again twice attacked by a squadron of our seaplanes, first early in the morning and also in the evening. In spite of a heavy fire from anti-aircraft guns, good results were obtained on the aviation station, on which hits and fires in the sheds were observed. One building belonging to the aviation station was burnt down.

"On July 26th, after an air fight over the Doiran Lake, an enemy aviator fell down."



R.A.F. Employee in Trouble.

At Aldershot, on July 27th, Reginald Forester McDonnell was charged on remand under the Public Stores Act, 1875, with being in unlawful possession of certain Government equipment, instruments and parts of an aeroplane. Originally there were four separate charges, two under the Army Act (1881), Section 156, but three were withdrawn.

Mr. Pearce, who prosecuted for the War Office, said that at the outbreak of war the defendant was employed at the Royal Aircraft Factory, where for some time he had been a charge hand. The police had recently discovered that the defendant had at three places a large quantity of Government property connected with aeroplanes. The bulk of this was found in a shed at the back of the North Camp Hotel, Farnborough, some at the defendant's house, and some at a room he rented.

When arrested the defendant said: "Whatever you find belongs to me. It was given to me by the late Col. Fulton (chief of the Aeronautical Inspection Department) and Mr. Cockburn, one of the present A.I.D. inspectors, can vouch for it." Mr. Pearce read a letter from the defendant bearing no date, but received in April, 1915, asking Major Heckstall-Smith (Assistant Superintendent, R.A.F.), for the loan of an obsolete 35 h.p. Anzani engine for use in connection with a baby biplane of defendant's own design, then almost completed. In the letter refusing this there was a warning to the defendant that Government property must not be taken, nor could it be lent for experiment.

Major Heckstall-Smith identified several articles. He said that even when he knew from that letter that the defendant was building an aeroplane he did not suspect him.

Cross-examined by Mr. Brandon (for the defendant), the witness said that he had many employees who were building aeroplanes or working on aeroplanes of private design without using Government material. Asked if it was not a fact that McDonnell was arrested when he returned from a meeting of the R.F.C. Inquiry Committee, the witness said that he did not know that the defendant was at the Inquiry.

Re-examined by Mr. Pearce, the witness said that he had been told that the defendant did not in fact give evidence before the Commission.

The defendant, giving evidence on oath, said that by an agreement which he signed anything he designed became the property of the Government. Some of the material in court had been given to him, and some he had obtained permission to use. One propeller he bought from the late Mr. Cody's son. One or two things had been left in the shed by other employees. He had done nothing secretly. Most of the things he had taken had come from the scrap heap.

The Bench convicted and fined the defendant the maximum

Berlin, July 30th.

"Near La Chalade, in the Western Argonne, in an air fight Lieutenant Baldamus put his fifth enemy machine hors de combat.

"Two other enemy aeroplanes were brought down—one on the eastern border of the Argonne, and the second east of Sennheim (in Alsace)."

Berlin, July 31st.

"An enemy air raid on Conflans was replied to by a bombardment of Pont-à-Mousson.

"A French aeroplane squadron which was sent against Mülheim (in Baden) was stopped near Neuenburg by our Fokkers, put to flight, and pursued. The enemy leading aeroplane was brought down north-west of Mulhausen.

"Lieutenant Hühndorf put his eleventh enemy machine out of action north of Bapaume and Lieutenant Wintgens his twelfth east of Péronne. A French biplane was brought down west of Pont-à-Mousson and another south of Thiaumont—the latter by anti-aircraft guns.

Turkish.

Constantinople, July 28th.

"One of our aviators on Monday flew over Tenedos and successfully dropped bombs on hostile ships and boats in the roadstead.

"On Monday the enemy, under the protection of guns, landed from some vessels over a hundred bandits north of Tuzla, west of Aivadjik. In an encounter between our troops and the bandits the latter lost some dead and wounded, and subsequently fled to their ships. Meantime, two of our aviators attacked the ships and boats by dropping bombs and firing machine-guns, inflicting losses on the enemy."

penalty of £5, refusing to discuss the question of honest or dishonest intention.

The "Triple Slide Aeroplane Calculator."

ONE of the above instruments, which was described fully in our issue of July 20th, has now arrived at the offices of "FLIGHT," where we shall be pleased to demonstrate it to prospective purchasers who might wish to see it working before finally deciding to acquire one of these highly ingenious and time-saving devices. We might add that we have tried it on the calculations of several known examples of machines, and that it appears to tally very well with actual figures.



PUBLICATIONS RECEIVED.

Hints for Flight Sub-Lieutenants, Royal Naval Air Service. By Flight Lieutenant. London: Forster, Groom & Co., Ltd. Price 1s.

Arabic for Our Armies. By Frank Scudamore. London: Forster, Groom & Co., Ltd. Price 3d.

"*Sprechen Sie deutsch*" and "*Parley Voo*"! By Col. F. N. Maude, C.B. London: Forster, Groom & Co., Ltd. Price 4d.

Aerial Russia: the Romance of the Giant Aeroplane. By Lieutenant-Colonel Roustam Bek. London: John Lane. Price 2s. 6d. net.



[Owing to extreme pressure on our columns "From Other Sources" and many features of "FLIGHT" are unavoidably crowded out.—ED.]

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6 " " "	3	3	6 " " "	5	6
12 " " "	6	6	12 " " "	11	0

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